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The *Canadian Journal of Fisheries and Aquatic Sciences* has been published continuously since 1901, previously as *Contributions to Canadian Biology* 1901–25, *Contributions to Canadian Biology and Fisheries* 1926–34, *Journal of the Biological Board of Canada* 1934–37, and *Journal of the Fisheries Research Board of Canada* 1938–79.

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Canadian Journal of Fisheries and Aquatic Sciences

Journal canadien des sciences halieutiques et aquatiques

Volume 38, Index 1981

INDEX TO PUBLICATIONS FOR 1981¹

In 1968 the Fisheries Research Board of Canada published Bulletin 164, a subject-author index and list of publications to 1964. Miscellaneous Special Publication 18, covering the period 1965-72, was published in 1973. Since 1973 an annual subject-author index has been published as a separate issue of the *Journal*. The index also contained a list of all articles, in all series of publications.

The 1981 index contains a subject index, author index and list of publications. All entries in the subject index are made up of an entry term plus a number of modifying terms (not exceeding three), plus a taxonomic name (omitted where the taxon is the entry term), or common name (omitted where the common name is the entry term), and a geographic entry (also omitted where the geographic area is the entry term). The entry term and modifying terms are selected from the controlled vocabulary wherever possible (*Thesaurus of Terms for Aquatic Sciences and Fisheries*, FAO Fish. Circ. 344 and supplement), but in some cases it is necessary to use "free terms" (i.e. uncontrolled terms of not more than 50 characters) to adequately convey the subject concept. It is possible for these free terms to appear in any modifying position but never as entry terms.

¹Prepared under contract by the Huntsman Marine Laboratory.

Printed in Canada

INDEX DES PUBLICATIONS POUR 1981¹

En 1968, l'Office des recherches sur les pêcheries du Canada publiait le Bulletin n° 164 qui constituait un index des matières et des auteurs, ainsi qu'une liste des Publications, antérieures à 1965. Le n° 18 des Publications diverses spéciales, visant la période de 1965 à 1972, a paru en 1973. Depuis 1973, on publie annuellement un index des matières et des auteurs comme numéro distinct du *Journal*. Cet index comprend aussi une énumération des articles ayant paru dans toutes les séries de publications.

L'index pour 1981 comprend un répertoire des matières et des auteurs et une liste des publications. Toutes les notices de l'index des matières sont composées d'un terme d'entrée et d'au plus trois termes modificatifs, ainsi que d'une désignation taxonomique (sauf si celle-ci constitue le terme d'entrée), ou d'une appellation courante (sauf si celle-ci est le terme d'entrée) et d'une inscription géographique (omise si la région géographique est le terme d'entrée). Dans la mesure du possible, le terme d'entrée et les termes modificatifs sont choisis suivant le vocabulaire contrôlé (*Thesaurus of Terms for Aquatic Sciences and Fisheries*, FAO Fish. Circ. 344 et supplément), mais dans certains cas il est nécessaire d'employer des "termes libres" (termes non contrôlés de 50 caractères ou moins) pour exprimer convenablement le sujet traité. Les termes libres peuvent servir de termes modificatifs mais jamais de termes d'entrée.

¹Établi à forfait par le Laboratoire Huntsman des sciences marines.

Imprimé au Canada

ABBREVIATIONS USED IN INDEX

(The designation (F) in the index indicates the article referred to was published in French, and (R) indicates the article was reprinted in 1981.)

J - Canadian Journal of Fisheries and Aquatic Sciences

SP - Special Publication

B - Bulletin

AR - Annual Report

T - Technical Report

M - Manuscript Report

D - Data Report

I - Industry Report

S - Studies

CA - Annual Report Canadian Atlantic Fisheries Scientific Advisory Committee (CAFSAC)

CRD - Research Document Canadian Atlantic Fisheries Scientific Advisory Committee (CAFSAC)

The Provinces and Territories of Canada are abbreviated to:

Alta.	(Alberta)	N.W.T.	(Northwest Territories)
B.C.	(British Columbia)	Ont.	(Ontario)
Man.	(Manitoba)	P.E.I.	(Prince Edward Island)
N.B.	(New Brunswick)	Que.	(Quebec)
Nfld.	(Newfoundland)	Sask.	(Saskatchewan)
N.S.	(Nova Scotia)	Y.T.	(Yukon Territory)

The names of states within the United States are abbreviated to conform with those in the CBE Style Manual.

Certain geographical areas (particularly oceans) have their major subdivisions designated by N(north), S(south), E(east), W(west), NW(northwest), NE(northeast), etc., also Atl.(Atlantic), Pac.(Pacific).

Certain international commissions are commonly referred to as: ICNAF(International Commission for the Northwest Atlantic Fisheries), NAFO(Northwest Atlantic Fisheries Organization).

Scientific names, common names, and their spellings for the Canadian and American marine fishes taken within 200-m depth and for freshwater fishes are indexed according to the nomenclature recommended in *A List of Common and Scientific Names of Fishes from the United States and Canada* (Fourth Edition, 1980), Special Publication No. 12 of the American Fisheries Society. Where authors have used names or spellings not conforming to those recommended, index headings for such names are included, referring to the recommended ones under which the subject entries will be found.

ABREVIATIONS EN USAGE DANS L'INDEX

(La désignation (F) dans l'index signifie que l'article dont il est question a été publié en français et la désignation (R) signifie que l'article a été réimprimé en 1981.)

- J - Journal canadien des sciences halieutiques et aquatiques
- SP - Publication spéciale
- B - Bulletin
- AR - Rapport annuel
- T - Rapport technique
- M - Rapport manuscrit
- D - Rapport statistique
- I - Rapport à l'industrie
- S - Etudes
- CA - Rapport annuel comité scientifique consultatif des pêches canadiennes dans l'Atlantique (CSCPCA)
- CRD - Document de la recherche comité scientifique consultatif des pêches canadiennes dans l'Atlantique (CSCPCA)

Les provinces et territoires du Canada sont abrégés comme suit:

Alta.	(Alberta)	N.W.T.	(Territoires du Nord-Ouest)
B.C.	(Colombie-Britannique)	Ont.	(Ontario)
Man.	(Manitoba)	P.E.I.	(Île-du-Prince-Édouard)
N.B.	(Nouveau-Brunswick)	Que.	(Québec)
Nfld.	(Terre-Neuve)	Sask.	(Saskatchewan)
N.S.	(Nouvelle-Écosse)	Y.T.	(Territoire du Yukon)

Les abréviations des noms des États des États-Unis sont tirées du Style Manual du "Council Biology Editors."

Certaines régions géographiques (surtout les océans) ont leur principales subdivisions indiquées de la façon suivante: N(nord), S(sud), E(est), W(ouest), NW(nord-ouest), NE(nord-est), ainsi que Atl.(Atlantique), Pac.(Pacifique).

On désigne communément certaines commissions internationales de la façon suivante: ICNAF (Commission internationale des pêcheries de l'Atlantique nord-ouest), NAFO(l'Organisation des pêches de l'Atlantique nord-ouest).

Les désignations scientifiques, les noms communs et l'orthographe des poissons marins canadiens et américains, pris en deçà de 200 m de profondeur, ainsi que les poissons d'eau douce sont indexés conformément aux recommandations de l'ouvrage *A List of Common and Scientific Names of Fishes from the United States and Canada* (quatrième édition, 1980), Publication spéciale n° 12 de l'American Fisheries Society. Quand un auteur utilise des désignations différentes des formes recommandées, on inclut des rubriques renvoyant à ces dernières, sous lesquelles on trouve les notices.

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2767 (pollutants, heavy metals, sediments, Baffin Bay)
2776 (community composition, quantitative distribution, sea ice, algae)
2799 (predators, polar bear, ringed seal, bearded seal)

- 2819 (catch statistics, stock assessment, Cetacea)
- 2840 (sea ice, polynyas, survival, marine mammals)
- 2842 (hunting, sociological aspects, economic analysis, Inuit)
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- 2847 (oil industry, environmental impact, marine mammals)
- CRD 79/50 (geographical distribution, population characteristics, Arctic cod, polar cod, toothed cod)
- Arctogadus borisovi* (see Cod, toothed)
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- Aromatics (see Hydrocarbons; see also Pollutants; Pollution; Pollution effects)
- Arsenic; Arsenic compounds
- J 38(5) : 518 (biochemical modification, lipids, metabolism, *Dunaliella tertiolecta*)
- Artificial substrata
- J 38(11) : 1371 (colonization, diatoms, bacteria, St. Lawrence R. estuary)
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- Associations (ecological)
- CRD 80/71 (multispecies fisheries, American lobster, sea scallop, Irish moss, Borden, P.E.I.)
- Atlantic Ocean (see Northeast Atlantic Ocean; also Northwest Atlantic Ocean)
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- J 38(12) : 1612 (phenotypic variations, population genetics, fishery management, Atlantic salmon)
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- D 259 (water transparency, primary production, Experimental Lakes Area, NW Ont.)
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- S 2811 (pollution effects, dredge spoil, Atlantic herring, Miramichi R. estuary, N.B.)
- Ayu (*Plecoglossus altivelis*)
- J 38(3) : 334 (vertebrae counts, environmental effects, mathematical models)
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- J 38(2) : 146 (DNA, analytical techniques, fish diseases, *Flexibacter columnaris*)
- (4) : 463 (diseases, *Yersinia ruckeri*, *Aeromonas hydrophilia*, channel catfish)
- (11) : 1371 (colonization, artificial substrata, St. Lawrence R. estuary)
- T 994 (heterotrophy, microbiology, oligotrophic lakes, B.C.)
- M 1611 (heterotrophic marine organisms, abundance, biodegradation, Cape Hatt, N.W.T.)
- S 2784 (oil spills, pollution effects, Alta.)
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- Bacterial diseases (see Diseases; Disease control)
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- S 2796 (predators, caribou, gray wolf)
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(7) : 779 (aromatics, avoidance, migrations, adults, Pacific salmon)
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(2) : 152 (biological poisons, monitoring, *Gonyaulax*, blue mussel, Gulf of Maine)
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(8) : 917 (cadmium, gills, water quality, rainbow trout)
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(9) : 1040 (ammonia, blue-green alga, lakes, Man.)
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(5) : 518 (arsenic, metabolism, lipids, *Dunaliella tertiolecta*)
(5) : 535 (enzymes, digestion, zooplankton, Bedford Basin, N.S.)
(6) : 669 (population genetics, subpopulation, regional variations, Greenland halibut, Gulf of St. Lawrence, Bering Sea, NW Atl.)
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- J 38(7) : 795 (spawning migrations, temperature effects, American shad, Connecticut R., CT)
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- J 38(12) : 1539 (freshwater fishes, historical account, coregonids, Great Lakes)
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- CRD 78/17 : (fishery management, mathematical models, Atlantic mackerel, NW Atl.)

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- J 38(8) : 996 (whirling disease, salmonids, B.C.)
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- T 918 : (phytoplankton, Georgian Bay, North Channel, L. Huron)
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79/14 : (fishery surveys, demersal species, ICNAF Div. 4VWX, NW Atl.)
79/24 : (capelin, Gulf of St. Lawrence)
81/46 : (marine fishes, NAFO Div. 4TVWX, NW Atl.)
81/49 : (fishery surveys, catch/effort, white hake, NAFO Div. 4T, NW Atl.)
81/55 : (fishery surveys, Greenland halibut, Gulf of St. Lawrence)

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- J 38(9) : 1120 (population genetics, environmental effects, Amphipoda)

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- S 2816 : (toxicity, pesticides)

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- J 38(12) : 1808 (population genetics, stock identification, morphology, L. Superior)

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- J 38(10) : 1182 (temperature effects, goldfish)

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- J 38(8) : 896 (bioenergetics, invertebrates, Lawrence L., MI)
(8) : 931 (insecticides, aquatic environment, food chains)
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- 229 (biological sampling, population structure, 1970-71, Pacific herring)
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- 241 (vertical distribution, abundance, benthos, zooplankton, Fraser R. estuary)
- 242 (biological sampling, population structure, 1971-72, Pacific herring)
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- 266 (exploratory fishing, longlining, rockfishes, sablefish, Bowie Seamount, Queen Charlotte Is.)
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- 2833 (agar, seasonal variations, biochemical composition, *Gracilaria* spp.)
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- Chemical extraction
 S 2788 (phosphates, chromatographic techniques)
 2837 (hydrocarbons, chromatographic techniques, fishes)
- Chemical kinetics
 S 2754 (methylation, mercury, sediments, Clay L., Ont.)
- Chemical pollutants (see Pollutants; Pollution; Pollution effects)
- Chemoreception
 J 38(3) : 268 (pollution effects, American lobster)
 S 2831 (amino acids, bioaccumulation, rainbow trout)
 2838 (copper compounds, lake whitefish)
- Chionoecetes*
bairdi (see Crab, tanner)
opilio (see Crab, snow)
tanneri (see Crab, tanner)
- Chironomidae
 J 38(8) : 978 (phosphorus, excretion, *Chironomus* spp., L. Michigan)
 S 2832 (environmental effects, sedimentation, Harris R., N.W.T.)
 2835 (taxonomy, new species, *Donicricotopus bicaudatus*, N.W.T.)
 2836 (phylogeny, *Cardiocladius*, taxonomy, *Tvetenia*, *Dratnalia*, *Eukiefferiella*)
- Chironomus* (see Chironomidae)
- Chlorine; Chlorine compounds
 J 38(7) : 752 (toxicity, waste water treatment, striped bass)
 S 2744 (toxicity, sediments, sea water, sand shrimp)
 2751 (bioaccumulation, American lobster)
 2830 (bioaccumulation, pollutants)
- Chlorophylls
 J 38(1) : 1 (nutrients, limiting factors, L. Huron)
 (2) : 205 (sediments, chromatographic techniques)
- Chondrus crispus* (see Moss, Irish)
- Chromatographic techniques
 J 38(2) : 205 (chlorophylls, sediments)
- S 2788 (chemical extraction, phosphates)
 2837 (hydrocarbons, chemical extraction, fishes)
- Circadian rhythms
 J 38(1) : 10 (feeding behavior, food, pink salmon, B.C.)
 (11) : 1405 (activity patterns, freshwater fishes, *Cazenovia* L., NY)
- Cisco, least (*Coregonus sardinella*)
 J 38(2) : 240 (sexual dimorphism, sympatric populations, Trout L., Y.T.)
- Cisco, shortjaw (*Coregonus zenithicus*)
 J 38(12) : 1908 (population genetics, stock identification, morphology, L. Superior)
- Ciscoes (*Coregonus* spp.)
 J 38(1) : 59 (morphology, genotypes, environmental effects, Great Lakes)
- Cladocera
 J 38(2) : 157 (amino acids, excretion, *Daphnia magna*)
 (3) : 275 (predation, *Bosmina longirostris*, *Ceriodaphnia reticulata*)
 (5) : 485 (pesticides, sublethal effects, *Daphnia pulex*)
 (11) : 1357 (development, temperature effects, food availability, *Daphnia rosea*, B.C.)
- Clam, Alaska surf (see Clam, Pacific surf)
- Clam, bar (*Spisula solidissima*)
 M 1607 (population dynamics, stock assessment, yield, Northumberland Strait, Gulf of St. Lawrence)
- Clam, Pacific surf (*Spisula polynyma*) (Alaska surf clam; pink neck clam)
 J 38(10) : 1173 (stock assessment, potential yield, life history, Bering Sea)
- Clam, pink neck (see Clam, Pacific surf)
- Clam, soft-shell (*Mya arenaria*)
 J 38(3) : 371 (population structure, yield predictions, mathematical models)
 (6) : 642 (dams, environmental effects, sedimentation, Cobequid Bay, Bay of Fundy, NW Atl.)
 M 1567 (stock assessment, yield predictions, Charlotte Co., N.B.)
 1606 (stock assessment, fishery management, P.E.I.)
- Clams (see Shellfish; see also names of species)
- Clarias batrachus* (see Catfish, walking)
- Clayoquot Sound (see Northeast Pacific Ocean)

- Climatic data
D 273 (watersheds, N.W.T.)
- Clupea harengus harengus* (see Herring, Atlantic)
harengus pallasii (see Herring, Pacific)
(*Clupea pallasii*)
- Clymenella torquata* (Polychaeta)
J 38(6) : 633 (new records, distribution, Maldanidae, B.C.)
- Cod, Arctic (*Boreogadus saida*)
J 38(3) : 257 (predators, capelin, Gulf of St. Lawrence)
CRD 79/12 (echo surveys, biomass, juveniles, ICNAF Div. 2J, Div. 3K, NW Atl.)
79/17 (distribution, population structure, sexual maturity, NW Atl.)
79/39 (vertical distribution, population number, SE Beaufort Sea)
79/50 (geographical distribution, population characteristics, Arctic)
- Cod, Atlantic (*Gadus morhua*)
J 38(10) : 1199 (food consumption, evaluation, bioenergetics, Gulf of St. Lawrence)
(11) : 1393 (catch/effort, yield predictions, multispecies fisheries, NW Atl.)
T 988 (interspecific relationships, recruitment, mathematical models, Atlantic mackerel, Gulf of St. Lawrence)
S 2750 (cold storage, fishery products)
CRD 77/8 (bioenergetics, population dynamics, fishery management, Gulf of St. Lawrence)
77/15 (stock assessment, yield predictions, Gulf of St. Lawrence)
77/16 (stock assessment, yield predictions, ICNAF Subdiv. 3Ps, NW Atl.)
78/9 (population structure, length-weight relationships, ICNAF Subdiv. 3Ps, 3Pn, 4Rs, NW Atl.)
78/13 (stock assessment, ICNAF Div. 4W, Subdiv. 4Vs, NW Atl.)
78/16 (growth, controlled conditions)
78/18 (stock assessment, yield, ICNAF Subdiv. 3Ps, NW Atl.)
78/21 (fishery management, mathematical models, multispecies fisheries, Gulf of St. Lawrence)
79/18 (stock assessment, yield predictions, ICNAF Subdiv. 3Ps, NW Atl.)
79/20 (tagging, migrations, North Shore, Que.)
79/21 (stock assessment, yield predictions, ICNAF Div. 4T, Subdiv. 4Vn, NW Atl.)
- 79/22 (stock assessment, yield predictions, ICNAF Subdiv. 3Ps, NW Atl.)
79/23 (stock assessment, yield predictions, ICNAF Div. 4RS, Subdiv. 3Pn, NW Atl.)
79/37 (mesh selectivity, otter trawls)
79/45 (statistical analysis, population characteristics, ICNAF Subdiv. 3Pn, 4Rs, NW Atl.)
79/49 (inshore fisheries, population characteristics, stock assessment, ICNAF Subdiv. 4Vn, NW Atl.)
80/82 (catch statistics, catch/effort, ICNAF Div. 4T, NW Atl.)
81/1 (predation, snow crab, Gulf of St. Lawrence)
81/19 (stock assessment, yield predictions, NAFO Div. 4W, Subdiv. 4Vs, NW Atl.)
81/20 (catch/effort, fishery surveys, NAFO Subdiv. 4Vn, NW Atl.)
81/39 (stock assessment, yield predictions, NAFO Subdiv. 3Ps, NW Atl.)
81/41 (stock assessment, yield predictions, NAFO Div. 4T, Subdiv. 4Vn, NW Atl.)
81/45 (stock assessment, yield predictions, NAFO Div. 4X, NW Atl.)
81/47 (stock assessment, yield predictions, NAFO Div. 4RS, Subdiv. 3Pn, NW Atl.)
- Cod, polar (*Arctogadus glacialis*)
CRD 79/50 (geographical distribution, population characteristics, Arctic)
- Cod, toothed (*Arctogadus borisovi*)
CRD 79/50 (geographical distribution, population characteristics, Arctic)
- Colonization
J 38(11) : 1371 (artificial substrate, diatoms, bacteria, St. Lawrence R. estuary)
S 2784 (oil spills, bacteria, benthic invertebrates, Alta.)
- Colorado State, USA
J 38(12) : 184 (feeding behavior, food consumption, brook trout, Cement Creek)
- Colossoma mitrei* (see Pacu)
- Commercial fishing (see also Fisheries; also Shellfish fisheries)
M 1616 (catch statistics, escapement, Pacific salmon, steelhead trout, B.C.)
D 255 (experimental fishing, fishery management, Arctic char, Baffin I., N.W.T.)
282 (catch statistics, Atlantic

- 283 salmon, 1977, Labrador, Nfld.)
(catch statistics, Atlantic salmon, 1978, Labrador, Nfld.)
- Community composition
J 38(11) : 1438 (zooplankton, E North America)
S 2776 (quantitative distribution, sea ice, algae, Arctic)
2783 (oxygen depletion, benthos, Howe Sound, NE Pac.)
- Competitors
J 38(10) : 1220 (habitat, brook trout, brown trout, MI)
(10) : 1228 (interspecific relationships, rainbow trout, cutthroat trout, B.C.)
- Computer programs
J 38(3) : 297 (age composition, regression analysis)
T 1025 (photometry, evaluation)
1030 (fishery surveys, trawling, Nfld.)
M 1525 (yield predictions, crustaceans, American lobster)
1603 (stock assessment, yield predictions, Pacific herring, B.C.)
CRD 78/12 (stock assessment, marine fishes)
78/30 (yield, mathematical models, growth, American lobster, Nfld.)
- Condition factor
M 1609 (seasonal variations, blue mussel, Malpeque Bay, P.E.I.)
- Conferences
J 38(12) : 1457-1914 (population genetics, stock identification, fishery management, Great Lakes)
SP 58 (bottom trawls, biological surveys, gear research, NW Atl.)
T 975 (toxicity workshop, aquatic environment, Canada)
990 (toxicity, aquatic environment)
1005 (marine mammals, resource management, Arctic)
CRD 81/8 (pollution effects, oil production, offshore fisheries)
- Connecticut State, USA
J 38(7) : 795 (bioenergetics, spawning migrations, temperature effects, American shad, Connecticut R.)
(7) : 806 (bioenergetics, spawning migrations, latitudinal variation, American shad, Connecticut R.)
- Copepoda
J 38(1) : 77 (growth, production, temperature effects, *Eurytemora herdmanni*, N.S.)
(1) : 101 (DDT, bioaccumulation, *Calanus finmarchicus*)
(3) : 275 (feeding behavior, predators, *Epischura lacustris*)
(5) : 485 (pesticides, sublethal effects, *Eurytemora affinis*)
- (5) : 504 (feeding behavior, selective feeding, *Diaptomus sicilis*, L. Michigan)
(9) : 1065 (horizontal distribution, vertical distribution, continental shelves, N.S.)
T 974 (vertical distribution, abundance, Georges Bank, NW Atl.)
- Copper; Copper compounds
J 38(8) : 880 (toxicity, acclimation, rainbow trout)
S 2806 (ions, sensors)
2810 (bioaccumulation, sediments, invertebrates)
2838 (chemoreception, lake whitefish)
- Coregonids (see Salmonidae)
- Coregonus artedii* (see Herring lake) (cisco)
clupeaformis (see Whitefish, lake)
hoyi (see Bloater)
kiyi (see Kiyi)
sardinella (see Cisco, least)
spp. (see Ciscos)
zenithicus (see Cisco, shortjaw)
- Corophium* (see Amphipoda)
- Corrections (Note: Corrections listed below refer only to J 37)
J 38(2) : 254 (to J 37(5):795, 805; J 37(6):1008; J 37(8):1273)
- Cossura soyeri* (Polychaeta)
J 38(6) : 633 (new records, distribution, Cossuridae, WA)
- Cossuridae (see Polychaeta)
- Cottus cognatus* (see Sculpin, slimy)
rhotheus (see Sculpin, torrent)
- Coyote (*Canis latrans*)
S 2765 (behavior, territoriality, secretion, Jasper National Park, Alta.)
2766 (feeding behavior, interspecific relationships, golden eagle, Jasper National Park, Alta.)
- Crab, Dungeness (*Cancer magister*)
T 1033 (pollution effects, coal dust, respiration)
M 1612 (food, Hecate Strait, NE Pac.)
- Crab, hermit (*Pagurus acadianus*)
S 2817 (parasites, *Nectonema*, Bay of Fundy, NW Atl.)
- Crab, jonah (*Cancer borealis*)
S 2817 (parasites, *Nectonema*, Bay of Fundy, NW Atl.)
- Crab, purple shore (*Hemigrapsus nudus*)
S 2839 (urine production, salinity effects)

- Crab, queen (see Crab, snow) 265 (F/V *Sun Maiden*, Hecate Strait, NE Pac., Dixon Entrance, B.C.)
- Crab, red (*Geryon quinquedens*) 266 (M/V *Viking Star*, Bowie Seamount, Queen Charlotte Is., B.C.)
- T 977 (stock assessment, Georges Bank, NW Atl., Scotian Shelf) 275 (ichthyoplankton cruise one, NE Pac. coast)
- CRD 78/38 (catch statistics, population structure, stock assessment, Scotian Shelf) 276 (ichthyoplankton cruise two, NE Pac. coast)
- 277 (ichthyoplankton cruise three, NE Pac. coast)
- Crab, rock (Atlantic) (*Cancer irroratus*) 278 (ichthyoplankton cruise four, NE Pac. coast)
- S 2817 (parasites, *Nectonema*, Bay of Fundy, NW Atl.) 279 (hydrography, NE Pac. coast)
- 280 (hydrography, NE Pac. coast)
- Crab, snow (*Chionoecetes opilio*) (queen crab; spider crab) 281 (hydrography, NE Pac. coast)
- J 38(2) : 163 (sexual maturity, body size, regional variations, Bering Sea)
- T 1002 (processing fishery products, quality control, preservation)
- 1003 (vertical distribution, size distribution, molting, Conception Bay, Nfld.)
- CRD 78/27 (stock assessment, yield predictions, Gulf of St. Lawrence)
- 78/41 (stock assessment, yield predictions, NW Cape Breton I., N.S.)
- 81/1 (catch statistics, predictions, Gulf of St. Lawrence)
- 81/40 (stock assessment, yield predictions, Cape Breton I., N.S.)
- 81/48F (catch statistics, catch/effort, yield, SW Gulf of St. Lawrence)
- 81/57 (stock assessment, yield predictions, Nfld.)
- Crab, spider (*Chionoecetes opilio*) (see Crab, snow)
- Crab, tanner (*Chionoecetes bairdi*) (C. tanneri) J 38(2) : 163 (sexual maturity, body size, regional variations, E Bering Sea)
- Crab, toad (*Hyas araneus*) (*H. coarctatus*) T 1003 (vertical distribution, size distribution, molting, Conception Bay, Nfld.)
- Crangon septemspinosa (see Shrimp, sand)
- Crassostrea virginica (see Oyster, Atlantic)
- Crayfish (*Orconectes virilis*) J 38(2) : 195 (production, environmental conditions, West Lost L., North Twin L., MI)
- Cruises (see also Fishery surveys)
- T 1028 (E.F. Prince, trawl surveys, S Gulf of St. Lawrence)
- D 225 (G.B. Reed, Georgia Strait, NE Pac.)
- 227 (G.B. Reed, shrimp cruise, no. 80-5-1, Vancouver I., B.C., Queen Charlotte Sound, NE Pac.)
- 251 (M/V *Arctic Harvester*, Queen Charlotte Sound, NE Pac., Dixon Entrance, B.C.)
- Crustacea (see also names of species)
- SP 54 (culture, freshwater organisms, manuals)
- M 1525 (yield predictions, computer programs)
- S 2739 (geographical distribution, biogeography, plankton, E North America)
- 2817 (parasites, *Nectonema*, rock crab, Jonah crab, hermit crab, striped pink shrimp, northern pink shrimp, Bay of Fundy, NW Atl.)
- Cryptomonas (see Rotifera)
- Cultured organisms (see also Fish culture; Shellfish culture)
- SP 54 (manuals, freshwater invertebrates)
- Curing
- I 113 (smoker-dryer, bloater, Maritime Provinces)
- Cyprinus carpio (see Carp)
- Cystophora cristata (see Seal, hooded)
- Cysts
- S 2789 (*Helicostomella subulata*, Bedford Basin, N.S.)
- D
- Dace, blacknose (*Rhinichthys atratulus*) T 982 (population characteristics, Nashwaak R. watershed, N.B.)
- Dams
- J 28(6) : 642 (environmental effects, sedimentation, invertebrates, Cobequid Bay, Bay of Fundy, NW Atl.)
- D 61 (environmental effects, migrations, freshwater fishes, Peace-Athabasca Delta, Alta.)
- Daphnia (see Cladocera)
- Data processing
- T 1000 (stock assessment, yield predictions, computer programs,

- Pacific herring, B.C.)
- DDT
J 38(1) : 101 (bioaccumulation, *Calanus finmarchicus*)
- Decapoda (see also names of species)
J 38(11) : 1438 (parasitism, *Pasiphaea pacifica*, Prince William Sound, AK)
- Delphinapterus leucas (see Whale, white)
- Development (biological) (see also Embryonic development)
J 38(3) : 334 (environmental effects, vertebrae counts, mathematical models, freshwater fishes)
(10) : 1189 (temperature effects, smolts, Atlantic salmon)
(11) : 1327 (environmental effects, eggs, capelin, Nfld., Labrador)
(11) : 1357 (temperature effects, food availability, *Daphnia rosea*, B.C.)
(11) : 1438 (developmental stages, parasites, *Holophryxus alaskensis*, Prince William Sound, AK)
- T 927
970 (temperature effects, embryos, larvae, Atlantic mackerel)
998 (bibliographies, salmonids)
998 (sexual maturity, Pacific herring, B.C.)
- Diaptomus (see Copepoda)
- Diatoms (Bacillariophyceae) (see also Phytoplankton)
J 38(11) : 1371 (colonization, artificial substrate, St. Lawrence R. estuary)
- Diets
J 38(3) : 367 (lipids, nutrition, coho salmon)
(10) : 1281 (samarium isotopes, tracers, medaka, goldfish)
SP 55 (nutritional requirements, fish culture, rainbow trout)
- Diptera (see also Chironomidae)
S 2739 (geographical distribution, biogeography, plankton, E North America)
- Directories
SP 57 (scientific personnel, 1981, Canada)
- Diseases; Disease control (see also names of diseases)
J 38(2) : 146 (fish diseases, DNA, analytical techniques, *Flexibacter columnaris*)
(4) : 463 (microscopy, *Yersinia ruckeri*, *Aeromonas hydrophilia*, channel catfish)
(5) : 547 (bacterial kidney disease, brook trout, brown trout, rainbow trout, WY)
(8) : 925 (viruses, vaccines, channel catfish)
(8) : 993 (antibiotics, bioaccumulation, channel catfish)
(8) : 996 (whirling disease, biological surveys, salmonids, B.C.)
(9) : 1045 (vibriosis, pathogenesis, winter flounder)
(11) : 1322 (toxicity, pathogens, *Aeromonas salmonicida*, salmonids)
CRD 78/5 (population dynamics, environmental effects, Atlantic herring, Northumberland Strait, Gulf of St. Lawrence)
- Dispersion
J 38(2) : 247 (new records, anadromous species, Arctic char, Norway)
- Distichlis (see Aquatic plants)
- Distribution
J 38(2) : 245 (geographical, new records, steelhead trout, Gulf of St. Lawrence)
(6) : 633 (geographical, new records, Cossuridae, Maldanidae, B.C., WA)
(6) : 638 (quantitative, environmental effects, phytoplankton, St. Margaret's Bay, N.S.)
(7) : 821 (new records, eelpouts, Arctic)
(9) : 1065 (horizontal, vertical, Copepoda, continental shelves, N.S.)
(10) : 1228 (ecological, rainbow trout, cutthroat trout, B.C.)
(11) : 1438 (geographical, new records, *Holophryxus alaskensis*, Prince William Sound, AK)
(12) : 1790 (subpopulation, allopatric populations, life history, lake whitefish, Great Lakes)
B 209 (geographical, check lists, Polychaeta, B.C., WA)
T 980 (quantitative, size, zooplankton, St. Georges Bay, N.S.)
1003 (vertical, seasonal variations, snow crab, toad crab, Conception Bay, Nfld.)
M 1594 (pink salmon, NE Pac.)
1596 (geographical, marine fishes, fishery surveys, Fraser R. estuary, B.C.)
D 241 (vertical, benthos, zooplankton, Fraser R. estuary, B.C.)
S 2739 (geographical, biogeography, plankton, Crustacea, Diptera, E North America)
2749 (geographical, larvae, pollock, sand lance, Bay of Fundy, NW Atl.)
2763 (geographical, stock identification, sperm whale, N Pac.)
2776 (quantitative, sea ice, algae, Arctic)

- 2809 (geographical, Hirudinea, Bay of Fundy, NW Atl.)
- 2822 (ringed seal, Baffin I., N.W.T.)
- 2849 (seasonal, phytoplankton, estuaries)
- CRD 77/7 (geographical, Atlantic mackerel, ICNAF Subareas 4, 5, NW Atl.)
- 77/19 (geographical, short-finned squid, Scotian Shelf)
- 77/31 (larvae, American lobster, Scotian Shelf)
- 79/17 (population structure, sexual maturity, Arctic cod, NW Atl.)
- 79/32 (geographical, migrations, juveniles, Atlantic herring, Bay of Fundy, NW Atl.)
- 79/39 (vertical, population number, Arctic cod, SE Beaufort Sea)
- 79/50 (geographical, population characteristics, cods, Arctic)
- 81/28 (geographical, abundance, Atlantic salmon, W Greenland)
- 81/55 (geographical, fishery surveys, Greenland halibut, Gulf of St. Lawrence)
- 91/56 (geographical, vertical, juveniles, haddock, Scotian Shelf)
- DNA (Deoxyribonucleic acid)
- J 38(2) : 146 (fish diseases, *Flexibacter columnaris*)
- Documentation
- T 992 (bibliographies, 1978-79, Department of Fisheries and Oceans, Western Region, Man.)
- Dogfish, spiny (*Squalus acanthias*)
- T 996 (storage effects, freezing, quality control, NE Pac.)
- D 262 (tagging, Strait of Georgia, NE Pac.)
- Dolly Varden (*Salvelinus malma*)
- J 37(12) : 1539 (biogeography, relict species, colonization, Y.T.)
- T 1004 (bibliographies, World Waters)
- Dolphin, white-sided (*Lagenorhynchus acutus*)
- S 2794 (life history, population structure, NW Atl.)
- Doncricotopus bicaudatus* (Chironomidae)
- S 2835 (new species, N.W.T.)
- Dratnalia* (see Chironomidae)
- Dunaliella* (see Alga, green)
- E
- Eagle, golden (*Aquila chrysaetos*)
- S 2766 (feeding behavior, interspecific relationships, coyote, Jasper National Park, Alta.)
- Echo surveys
- J 38(9) : 1141 (statistical sampling, variability, population density)
- M 1605 (pelagic fisheries, semi-demersal fisheries, rockfishes, Pacific herring, Queen Charlotte Sound, NE Pac.)
- CRD 79/12 (biomass, juveniles, Arctic cod, ICNAF Div. 2J, 3K, NW Atl.)
- Echosounding
- T 875 (scattering layers, zooplankton, micronekton, May 1977, Scotian Shelf)
- 936 (scattering layers, zooplankton, micronekton, June 1978, Scotian Shelf)
- Ecological distribution
- M 1479 (migrations, nursery grounds, juveniles, chinook salmon, coho salmon, sockeye salmon, Shuswap L., B.C.)
- Ecology
- J 38(3) : 353 (aquatic insects, succession, long term changes, Appalachian streams, NC)
- (4) : 441 (thermal pollution, zooplankton, L. Michigan)
- (10) : 1271 (interspecific relationships, invertebrates, streams, NC)
- B 210 (phytoplankton, photosynthesis, physiology)
- T 928 (ecosystems, intertidal environment, Pecks Cove, Bay of Fundy, NW Atl.)
- 965 (quantitative distribution, intertidal environment, *Corophium volutator*, *Heteromastus filiformis*, *Macoma balthica*, Bay of Fundy, NW Atl.)
- 966 (freshwater, physical limnology, chemical limnology, Y.T.)
- 973 (associations, fisheries, Irish moss, American lobster, sea scallop, Borden, P.E.I.)
- 1022 (habitat improvement, nursery grounds, freshwater lakes, sockeye salmon, B.C.)
- S 2822 (behavior, ringed seal, Baffin I., N.W.T.)
- CRD 80/72 (harvesting machines, Irish moss, Gulf of St. Lawrence)
- Economic analysis
- S 2842 (hunting, sociological aspects, Inuit, Arctic)
- Ecosystems
- J 38(5) : 571 (thermodynamics, evolution, perspectives)
- (7) : 860 (nutrient cycles, measuring, phosphorus, rivers, TN)
- T 928 (ecology, intertidal environment, Pecks Cove, Bay of Fundy, NW Atl.)

- S 2771 (marine, time series analysis)
 2772 (energy flow, mathematical models, suspended matter)
 2774 (grazing, zooplankton)
- Eddies
 S 2761 (air-water interface, evaporation)
- Eel, American (*Anguilla rostrata*)
 T 982 (population characteristics, Nashwaak R. watershed, N.B.)
- Eelpout, archer (*Lycodes sagittarius*)
 J 38(7) : 821 (new records, geographical distribution, morphology, Arctic)
- Eelpout, cold water (*Lycodes frigidus*)
 J 38(7) : 821 (geographical distribution, morphology, Arctic)
- Eelpout, doubleline (*Lycodes eudipleurostictus*)
 J 38(7) : 821 (new records, geographical distribution, morphology, Arctic)
- Eelpout, longear (*Lycodes seminudus*)
 J 38(7) : 821 (geographical distribution, morphology, Arctic)
- Eelpout, scaly (*Lycodes squamiventer*)
 J 38(7) : 821 (new records, geographical distribution, morphology, Arctic)
- Eelpout, threespot (*Lycodes rossi*)
 J 38(7) : 821 (geographical distribution, morphology, Arctic)
- Eire
 J 38(12) : 1576 (population genetics, population structure, fishery management, Atlantic salmon)
- Embryonic development
 T 927 (temperature effects, Atlantic mackerel)
- Emergence
 J 38(2) : 215 (environmental effects, winds, survival, larvae, capelin, Nfld.)
 T 1020 (gravel, fry, Atlantic salmon)
- Energy flow
 J 38(4) : 414 (phosphorus, mathematical models, lakes)
 (5) : 571 (ecosystems, evolution, perspectives)
 S 2772 (pelagic ecosystems, mathematical models, suspended matter)
 2825 (primary production, secondary production, L. Tanganyika, Africa)
- Engraulis capensis* (see Anchovy, South African)
ringens (see Anchovy, Peruvian)
- Entrainment
 J 38(1) : 120 (ichthyoplankton, screens, L. Michigan)
- Environmental conditions
 J 38(2) : 175 (production, crayfish, West Lost L., North Twin L., MI)
 (4) : 449 (current velocity, nutrients, growth, periphyton)
 (4) : 471 (stream flow, upwelling, yield, coho salmon, OR)
- Environmental effects
 J 38(1) : 59 (morphology, genotypes, ciscoes, Great Lakes)
 (2) : 137 (clear-cutting, predators, streams, Cascade Mts., OR)
 (2) : 215 (winds, emergence, survival, larvae, capelin, Nfld.)
 (3) : 334 (vertebrae counts, development, mathematical models, freshwater fishes)
 (6) : 638 (quantitative distribution, phytoplankton, St. Margaret's Bay, N.S.)
 (6) : 642 (sedimentation, dams, invertebrates, Cobequid Bay, Bay of Fundy, NW Atl.)
 (9) : 1052 (growth, light intensity, cell size, green alga)
 (9) : 1096 (remote sensing, zooplankton)
 (9) : 1106 (pollutants, steroids, channel catfish)
 (9) : 1120 (population genetics, bioselection, Amphipoda)
 (11) : 1327 (mortality, development, eggs, capelin, Nfld., Labrador)
 (11) : 1444 (predators, torrent sculpin, insects)
 (12) : 1601 (population characteristics, natural selection, Atlantic salmon, Que., Nfld., Labrador)
 (12) : 1715 (population genetics, polymorphism, largemouth bass, USA)
 T 985 (pesticides, aquatic environment)
 1005 (oil and gas exploration, marine mammals, Arctic)
 1012 (harvesting machines, recruitment, brown alga, SW N.S.)
 M 1593 (dragrakes, substrata, Irish moss, SW N.S.)
 D 61 (dams, migrations, freshwater fishes, Peace-Athabasca Delta, Alta.)
 S 2737 (light cells, ultrastructure, *Porphyridium* sp.)
 2741 (phytoplankton, photosynthesis, coast, N.S.)
 2782 (hydraulic structures, habitat, macroinvertebrates, Squamish R., Fraser R., B.C.)
 2812 (eutrophication, benthos, invertebrates, freshwater lakes)
 2832 (sedimentation, chironomids, Harris R., N.W.T.)
 CRD 78/5 (population dynamics, diseases, Atlantic herring, Northumberland Strait, Gulf of St. Lawrence)
 80/69 (substrata, harvesting, Irish moss, N.S.)

- 81/16 (temperature, egg deposition, Atlantic salmon, Western Arm Brook, Nfld.)
- Environmental impact
J 38(5) : 591 (program evaluation report, perspectives)
(12) : 1899 (population genetics, population structure, fishes) (dredging, sediments, Atlantic herring, Miramichi Bay, N.B.)
T 1008 (petroleum, fisheries, NW Atl., NE Atl.)
I 124 (oil industry, marine mammals, Arctic)
S 2847
- Enzymes
J 38(5) : 535 (digestion, zooplankton, Bedford Basin, N.S.)
- Eogammarus* (see Amphipoda)
- Epischura* (see Copepoda)
- Equipment
J 38(4) : 466 (recording, measuring devices, automation, fishes)
(8) : 912 (seston, size distribution, particle counters, algae)
T 991 (oceanographic, organic suspended matter, bubbling)
- Erignathus barbatus* (see Seal, bearded)
- Escapement
M 1608 (migrations, chinook salmon, coho salmon, Cowichan-Koksilah R., Vancouver I., B.C.)
1616 (catch statistics, commercial fishing, Pacific salmon, steelhead trout, B.C.)
D 159 (Pacific salmon, Bella Bella, B.C.)
222 (spawning, rivers, Pacific salmon, Rivers Inlet, South Inlet, B.C.)
- Esox lucius* (see Pike, northern)
- Estuaries (see also names of estuaries)
S 2770 (zooplankton, Eskimo Lakes, Liverpool Bay, N.W.T.)
2849 (phytoplankton, temporal distribution)
- Eukiefferiella* (see Chironomidae)
- Euphausiacea
J 38(11) : 1449 (cadmium, tissues, bioaccumulation, *Meganyctiphanes norvegica*)
- Eurytemora* (see Copepoda)
- Eutrophic lakes; Eutrophication (see also Experimental Lakes Area, Northwestern Ontario)
- J 38(8) : 960 (nannoplankton, biomass, trophic structure, L. Memphremagog, Que.)
S 2764 (water quality, Prairie Provinces)
2812 (environmental effects, benthos, invertebrates, freshwater lakes)
- Evaporation
J 38(9) : 1035 (volatilization, ammonia, surface water, Man.)
S 2761 (air-water interface, eddies)
- Evolution
J 38(12) : 1459 (population genetics, resource management)
(12) : 1515 (organismal, molecular, literature reviews)
- Excretion; Excretory products
J 38(2) : 157 (amino acids, *Daphnia magna*)
(8) : 978 (phosphorus, tubificids, *Chironomus* spp., L. Michigan)
(11) : 1316 (phosphorus, *Strombidium viride*, *Keratella cochlearis*, Jack's L., Ont.)
(11) : 1350 (hexachlorobenzene, rainbow trout, L. Ontario)
S 2752 (chemical compounds, aquatic animals)
2841 (metabolism, chemical compounds, bioaccumulation, rainbow trout, brook trout, threespine stickleback)
2844 (cadmium, American lobster)
- Experimental fishing
D 255 (commercial fishing, fishery management, Arctic char, Baffin I., N.W.T.)
I 122 (gillnets, flying squid, Vancouver I., B.C.)
- Experimental Lakes Area, Northwestern Ontario
J 38(10) : 1209 (toxicity, cadmium, mercury, plankton)
D 259 (attenuation, light penetration, primary production)
260 (primary production, phytoplankton, photosynthesis, carbon)
285 (environmental data, meteorological data, hydrology)
- Exploratory fishing
M 1586 (spot prawn, Queen Charlotte Is., B.C.)
D 226 (midwater trawls, rockfishes, Vancouver I., B.C.)
266 (catch statistics, longlining, rockfishes, sablefish, Bowie Seamount, Queen Charlotte Is., B.C.)
CRD 81/6 (potential resources, biomass, striped pink shrimp, E Hudson Strait, Ungava Bay, NW Atl.)
81/61 (Atlantic herring, NAFO Div. 4T, NW Atl.)

- F
- Fallout
S 2775 (zinc, cadmium, lead, lakes, Man.)
- Pecundity
T 1009 (regional variations, annual variations, Pacific herring, B.C.)
D 253 (biological data, Pacific herring, B.C.)
- Feeding behavior
J 38(1) : 10 (circadian rhythms, food, pink salmon, B.C.)
(2) : 184 (food consumption, brook trout, Cement Creek, CO)
(3) : 257 (food, predators, capelin, Gulf of St. Lawrence)
(3) : 275 (predators, *Ceriodaphnia reticulata*, *Bosmina longirostris*, *Epischura lacustris*)
(3) : 360 (predators, salmonids, northern squawfish, Willamette R., OR)
(5) : 504 (selective feeding, *Diaptomus sicilis*, L. Michigan)
(7) : 765 (larvae, brook trout, Atlantic salmon, Matamek R., Que.)
(10) : 1264 (predation, vision, bluegill)
(11) : 1339 (grazing, seaweeds, green sea urchin, N.S.)
S 2766 (interspecific relationships, golden eagle, coyote, Jasper National Park, Alta.)
CRD 79/15 (food, Atlantic herring, NW Atl.)
- Fins
J 38(9) : 1168 (soft fin rays, marking, freshwater fishes)
- Fish catch statistics; Landing statistics
T 1007 (commercial fishing, Atlantic salmon, Nfld., Labrador)
M 1604F (fishery resources, population structure, capelin, W Gulf of St. Lawrence)
1616 (commercial fishing, escapement, Pacific salmon, steelhead trout, B.C.)
D 58 (tagging, sampling, coho salmon, chinook salmon, B.C.)
196 (tagging, sampling, chinook salmon, coho salmon, steelhead trout, B.C.)
197 (tagging, sampling, chinook salmon, coho salmon, steelhead trout, B.C.)
220 (commercial fishing, 1969-72, Atlantic salmon, Labrador, Nfld.)
221 (commercial fishing, 1979, Atlantic salmon, Labrador, Nfld.)
225 (fishery surveys, walleye pollock, Pacific hake, Strait of Georgia, NE Pac.)
228 (Pacific herring, 1970-71, B.C.)
231 (Pacific herring, 1971-72, B.C.)
- 232 (Pacific herring, 1972-73, B.C.)
233 (Pacific herring, 1973-74, B.C.)
234 (Pacific herring, 1974-75, B.C.)
235 (Pacific herring, 1975-76, B.C.)
236 (Pacific herring, 1976-77, B.C.)
237 (Pacific herring, 1977-78, B.C.)
238 (Pacific herring, 1978-79, B.C.)
239 (Pacific herring, 1979-80, B.C.)
256 (population structure, sampling, 1970-80, Pacific herring, B.C.)
263 (catch/effort, angling, Atlantic salmon, Labrador, Nfld.)
266 (exploratory fishing, longlining, rockfishes, sablefish, Bowie Seamount, Queen Charlotte Is., B.C.)
282 (commercial fishing, Atlantic salmon, 1977, Labrador, Nfld.)
283 (commercial fishing, Atlantic salmon, 1978, Labrador, Nfld.)
I 120 (fishery data, roe, 1978-79, Pacific herring, B.C.)
CRD 78/6 (population dynamics, by catch, witch flounder, St. Pierre Bank NW Atl.)
78/15 (age composition, statistical analysis)
78/44 (stock assessment, population structure, Atlantic herring, St. Lawrence R. estuary)
79/13 (stock assessment, population structure, witch flounder, ICNAF Subdiv. 3Ps, NW Atl.)
79/48F (fishery development, population characteristics, Greenland halibut, Gulf of St. Lawrence)
80/81 (historical account, life history, swordfish, E coast, Canada)
80/82 (catch/effort, Atlantic cod, ICNAF Div. 4T, NW Atl.)
81/3 (gillnets, mesh selectivity, season regulations, Atlantic salmon, Greenland)
81/4 (catch/effort, coastal fisheries, Atlantic herring, Gulf of St. Lawrence)
81/62 (catch/effort, flatfishes, NAFO Div. 4VWX, NW Atl.)
- Fish conversion factors
CRD 81/30 (weight, Atlantic salmon, W Greenland)
- Fish culture (see also Aquaculture; Aquaculture techniques; also Genetics)
J 38(3) : 367 (diets, lipids, nutrition, coho salmon)
(5) : 554 (rearing, recruitment, fishery management, pink salmon, Baranoff I., AK)
(6) : 649 (growth, mathematical models, salmonids)
(10) : 1189 (thermal stimuli, smolts, Atlantic salmon)
(11) : 1322 (diseases, toxicity, pathogens, *Aeromonas salmonicida*, salmonids)

- (12) : 1457-1914 (conferences, stock identification, Great Lakes)
- (12) : 1665 (population genetics, breeding, Pacific salmon, AK)
- (12) : 1867 (population genetics, fishery management)
- SP 55 (nutritional requirements, diets, rainbow trout)
- T 1011 (cage culture, rearing, experimental research, Atlantic salmon, pink salmon, rainbow trout, Deer I., N.B.)
- M 1502 (hatcheries, chinook salmon, Kitimat R., B.C.)
- D 252 (stocking, coho salmon, Campbell R., Vancouver I., B.C.)
- 271 (stocking, production, biological data, Atlantic salmon, brook trout, rainbow trout, lake trout, Maritime Provinces)
- S 2768 (induced breeding, hormones, pacu)
- 2790 (ranching, Atlantic salmon, Maritime Provinces)
- Fish eggs (see also Fish culture; also Roe)
- J 38(4) : 381 (spawning, Pacific herring, B.C.)
- T 984 (spawning grounds, diving, fishery surveys, Atlantic herring, Miramichi Bay, N.B.)
- M 1600 (fishery surveys, diving, spawning, Pacific herring, B.C.)
- D 267 (hatching, substrata, Pacific herring)
- S 2827 (reproduction, pH, Atlantic salmon)
- CRD 79/31 (spawning, stock assessment, Atlantic mackerel, Gulf of St. Lawrence)
- Fish larvae (see also names of species)
- J 38(2) : 215 (environmental effects, emergence, survival, capelin, Nfld.)
- S 2749 (distribution, new records, pollock, sand lance, Bay of Fundy, NW Atl.)
- Fish physiology
- J 38(7) : 758 (enzymatic activity, temperature effects, photoperiodicity, steelhead trout)
- (10) : 1182 (blood, temperature effects, goldfish)
- (10) : 1189 (thermal stimuli, development, smolts, Atlantic salmon)
- (10) : 1199 (bioenergetics, Atlantic cod, Gulf of St. Lawrence)
- (10) : 1283 (metabolism, rainbow trout)
- D 240 (metabolism, respiration, *Onisimus affinis*)
- Fisheries
- J 38(4) : 424 (multispecies fisheries, population dynamics, population structure, fishes)
- (10) : 1247 (yield predictions, mathematical models, marine fishes)
- (11) : 1393 (multispecies fisheries, yield predictions, catch/effort, fishes, NW Atl.)
- T 973 (ecological associations, Irish moss, American lobster, sea scallop, Borden, P.E.I.)
- 1007 (commercial fishing, catch statistics, Atlantic salmon, Nfld., Labrador)
- 1028 (finfish, fishery surveys, S Gulf of St. Lawrence)
- 1031 (commercial species, walleye pollock, B.C.)
- M 1605 (pelagic, semi-demersal, echo surveys, rockfishes, Pacific herring, Queen Charlotte Sound, NE Pac.)
- 1615 (pollution monitoring, E coast, Canada)
- D 220 (commercial fishing, catch statistics, 1969-72, Atlantic salmon, Labrador, Nfld.)
- 221 (commercial fishing, catch statistics, 1979, Atlantic salmon, Labrador, Nfld.)
- I 124 (environmental impact, petroleum, NW Atl., NE Atl.)
- CRD 78/21 (multispecies fisheries, mathematical models, fishery management, Atlantic cod, Gulf of St. Lawrence)
- 78/32 (fishing grounds, statistical unit areas, E coast, Canada)
- 79/7 (fishery surveys, biomass, statistical sampling, Fortune Bay, Nfld.)
- 79/47 (by catch, finfish, northern pink shrimp, Scotian Shelf)
- 79/49 (inshore fisheries, population characteristics, stock assessment, Atlantic cod, ICNAF Subdiv. 4Vn, NW Atl.)
- 80/70 (commercial fishing, catch sampling, E coast, Canada)
- 81/4 (coastal fisheries, catch statistics, catch/effort, Atlantic herring, Gulf of St. Lawrence)
- 81/8 (offshore fisheries, oil production, pollution effects)
- 81/36 (purse seines, catch/effort, mathematical models)
- Fishery development
- I 121 (potential resources, tunas, NE Pac.)
- CRD 79/9 (population structure, Greenland halibut, Gulf of St. Lawrence)
- 79/48F (catch statistics, population characteristics, Greenland halibut, Gulf of St. Lawrence)
- Fishery economics
- T 1010 (stocking density, Atlantic oyster, Dunk R., P.E.I.)
- M 1587 (stocking density, resource

- management, Atlantic oyster,
Dunk R., P.E.I.)
- Fishery industry equipment
I 113 (smoker-dryer, bloater, Maritime
Provinces)
- Fishery management
J 38(5) : 559 (sport fishing, perspectives)
(6) : 657 (size-limit regulations,
sport fishing, salmonids)
(6) : 678 (recruitment, mathematical
models, fishes)
(6) : 690 (recruitment, mathematical
models, fishes)
(12) : 1457-1914 (conferences, population
genetics, stock identification,
Great Lakes)
(12) : 1464 (population genetics, Great
Lakes)
(12) : 1466 (population dynamics,
stocking, Great Lakes)
(12) : 1469 (population genetics,
Pacific salmon, B.C.)
(12) : 1476 (population genetics, stock
identification, fishery resources,
Great Lakes)
(12) : 1523 (population genetics,
biochemistry, fishes)
(12) : 1576 (population genetics,
population structure, Atlantic
salmon, British Isles, Eire)
(12) : 1612 (stocking, Atlantic salmon,
Atlantic Provinces, New England)
(12) : 1657 (stock identification,
historical account, Pacific
salmon, B.C.)
(12) : 1685 (population genetics,
stocking, lake trout, L. Simcoe,
L. Opeongo, Ont.)
(12) : 1814 (subpopulation, population
characteristics, population
genetics, walleye, North America)
(12) : 1856 (population genetics,
freshwater fishes, Great Lakes)
(12) : 1867 (fish culture, population
genetics)
(12) : 1877 (stocking, population
genetics, Great Lakes)
(12) : 1889 (subpopulation, population
genetics)
(12) : 1908 (population genetics, fishery
policy, resource conservation)
M 1589 (life history, fishery resources,
Arctic char, N Labrador)
1590 (sport fishing, fishery resources,
Atlantic salmon, Labrador, Nfld.)
1606 (fishery resources, stock
assessment, soft-shell clam,
P.E.I.)
D 229 (tagging, recovery, Pacific
salmon, high seas, N Pac.)
255 (experimental fishing, commercial
fishing, Arctic char, Baffin I.,
N.W.T.)
I 123 (stock assessment, research
programs, molluscs, Maritime
Provinces)
CRD 77/8 (Atlantic cod, Gulf of St.
Lawrence)
77/20 (mesh regulations, silver hake,
Scotian Shelf)
77/25 (mathematical models, stock
assessment, hooded seal, Nfld.)
78/2 (stock assessment, quota
regulations, Atlantic herring,
W Nfld.)
78/17 (mathematical models, biological
characteristics, Atlantic
mackerel, NW Atl.)
78/21 (mathematical models, multispecies
fisheries, Atlantic cod, Gulf of
St. Lawrence)
78/33 (population characteristics, harp
seal, NW Atl.)
79/1 (stock assessment, northern pink
shrimp, Labrador)
79/25 (by catch, juveniles, redfish,
northern pink shrimp, Esquimaux
Channel, Gulf of St. Lawrence)
80/76 (stock assessment, population
structure, Atlantic herring,
Fortune Bay, Nfld.)
81/15 (stock assessment, catch/effort,
swordfish, NW Atl.)
- Fishery policy
J 38(12) : 1908 (fishery management, resource
conservation)
- Fishery products (see also Processing fishery
products)
T 914 (aromatics, pollution effects,
human food)
S 2750 (cold storage, Atlantic cod,
Atlantic herring, Atlantic
mackerel)
- Fishery regulations
J 38(6) : 657 (size limit, sport fishing,
fishery management, salmonids)
- Fishery resources
J 38(12) : iv (historical account, foreword,
conferences, Great Lakes)
(12) : 1476 (population genetics,
fishery management, Great Lakes)
(12) : 1882 (resource conservation,
international cooperation,
monitoring, salmonids, World
Waters)
SP 47 (atlases, NW Atl.)
T 977 (stock assessment, red crab,
Georges Bank, NW Atl., Scotian Shelf)
M 1539 (fishery surveys, habitat
improvement, rivers, Pacific
salmon, Vancouver I., B.C.)
1589 (life history, fishery management,
Arctic char, N Labrador)
1590 (sport fishing, fishery management,
Atlantic salmon, Labrador, Nfld.)
1604F (catch statistics, population

- structure, capelin, W Gulf of St. Lawrence)
 1606 (stock assessment, fishery management, soft-shell clam, P.E.I.)
 1610 (potential resources, population structure, Pacific hake, Vancouver I., B.C.)
 1613 (literature reviews, bibliographies, Beaufort Sea, Mackenzie Delta, N.W.T.)
 D 265 (fishery surveys, roe, Pacific herring, Hecate Strait, NE Pac., Dixon Entrance, B.C.)
 I 119F (stock assessment, commercial species, St. Lawrence R. estuary)
- Fishery surveys
 T 955 (marine fishes, biological properties, St. Georges Bay, N.S.)
 984 (eggs, spawning grounds, diving, Atlantic herring, Miramichi Bay, N.B.)
 1028 (demersal fisheries, short-finned squid, S Gulf of St. Lawrence)
 1030 (computer programs, trawling, Nfld.)
 M 1539 (fishery resources, habitat improvement, rivers, Pacific salmon, Vancouver I., B.C.)
 1584 (sport fishing statistics, Yellowknife R., Hay R., N.W.T.)
 1596 (geographical distribution, marine fishes, Fraser R. estuary, B.C.)
 1600 (eggs, diving, spawning, Pacific herring, B.C.)
 1605 (pelagic fisheries, semi-demersal fisheries, rockfishes, Pacific herring, Queen Charlotte Sound, NE Pac.)
 1618 (stock assessment, red sea urchin, Gulf Is., B.C.)
 D 225 (catch statistics, walleye pollock, Pacific hake, Strait of Georgia, NE Pac.)
 227 (catch statistics, smooth pink shrimp, Queen Charlotte Sound, NE Pac., Vancouver I., B.C.)
 251 (population structure, walleye pollock, Queen Charlotte Sound, NE Pac., Dixon Entrance, B.C.)
 265 (fishery resources, roe, Pacific herring, Hecate Strait, NE Pac., Dixon Entrance, B.C.)
 286 (biological data, stock assessment, rockfishes, Vancouver I., Langara I., B.C.)
 CRD 78/26 (stock assessment, yield predictions, northern pink shrimp, Esquiman Channel, Gulf of St. Lawrence)
 79/4 (catch statistics, northern pink shrimp, Labrador)
 79/7 (biomass, statistical sampling, demersal species, Fortune Bay, Nfld.)
- 79/14 (biomass, demersal species, ICNAF Div. 4VMX, NW Atl.)
 81/20 (research, catch/effort, Atlantic cod, NAFO Subdiv. 4Vn, NW Atl.)
 81/46 (stock assessment, biomass, marine fishes, NAFO Div. 4TVWX, NW Atl.)
 81/49 (catch/effort, white hake, NAFO Div. 4T, NW Atl.)
 81/55 (biomass, geographical distribution, Greenland halibut, Gulf of St. Lawrence)
 81/56 (geographical distribution, vertical distribution, juveniles, haddock, Scotian Shelf)
- Fishes (see also Freshwater fishes; also Marine fishes; also names of species)
 J 38(4) : 424 (multispecies fisheries, population dynamics, population structure)
 (4) : 466 (recording equipment, measuring devices, automation)
 (6) : 678 (recruitment, mathematical models, fishery management)
 (6) : 690 (recruitment, mathematical models, fishery management)
 (6) : 704 (recruitment, stock assessment, statistical analysis)
 (6) : 711 (recruitment, stock assessment, statistical analysis)
 (12) : 1838 (stock identification, population genetics, methodology)
 (12) : 1899 (population genetics, population structure)
 S 2762 (mercury compounds, toxicity)
 2837 (hydrocarbons, chemical extraction, chromatographic techniques)
- Fishing effort
 CRD 81/12 (catch/effort, Atlantic herring, S Gulf of St. Lawrence)
 81/32 (Atlantic herring, Magdalen Is., Que.)
- Fishing gear; Gear construction; Gear research
 SP 58 (bottom trawls, biological surveys, conferences, NW Atl.)
 T 1012 (harvesting machines, environmental effects, recruitment, brown alga, SW N.S.)
 M 1593 (dragrakes, environmental effects, substrata, Irish moss, SW N.S.)
 1601 (research, dragrakes, selectivity, Irish moss, S Gulf of St. Lawrence)
 S 2738 (trawl nets, construction, selectivity)
 CRD 79/29 (trap nets, catch/effort, Atlantic herring, Gulf of St. Lawrence)
 81/43 (otter trawls, gear selectivity, northern pink shrimp, Labrador)
- Fishing nets
 T 1018 (wounds, Atlantic salmon, Nfld.)
- Fishing power
 M 1601 (gear research, dragrakes, Irish

- moss, S Gulf of St. Lawrence)
- Fishways
D 254 (population number, Atlantic salmon, Beechwood Dam, Saint John R., N.B.)
S 2757 (hydraulic engineering, freshwater fishes)
- Flatfishes (Pleuronectidae; Bothidae) (see also names of species)
J 38(8) : 968 (life history, reproduction)
(11) : 1393 (catch/effort, yield predictions, multispecies fisheries, NW Atl.)
CRD 79/27 (catch/effort, population dynamics, Scotian Shelf)
81/62 (catch statistics, catch/effort, NAFO Div. 4VWX, NW Atl.)
- Flexibacter columnaris*
J 38(2) : 146 (DNA, analytical techniques, fish diseases, Gulf of Maine)
- Flocculation
S 2778 (suspended matter, snow)
2779 (sediments, settling rate)
- Florida State, USA
J 38(7) : 806 (bioenergetics, spawning migrations, latitudinal variation, American shad, St. Johns R.)
- Flounder, winter (*Pseudopleuronectes americanus*)
J 38(9) : 1045 (vibriosis, pathogenesis)
CRD 79/27 (catch/effort, population dynamics, Scotian Shelf)
- Flounder, witch (*Glyptocephalus cynoglossus*)
J 38(7) : 782 (stock identification, population structure, population genetics, Nfld.)
CRD 77/14 (stock assessment, yield predictions, ICNAF Div. 4RS, Subdiv. 3Pn, NW Atl.)
77/17 (stock assessment, yield predictions, ICNAF Subdiv. 3Ps, NW Atl.)
78/6 (population dynamics, catch statistics, St. Pierre Bank, NW Atl.)
78/7 (stock assessment, population structure, ICNAF Div. 4RS, NW Atl.)
79/8 (population structure, stock assessment, ICNAF Div. 4RS, NW Atl.)
79/13 (catch statistics, population structure, stock assessment, ICNAF Subdiv. 3Ps, NW Atl.)
79/27 (catch/effort, population dynamics, Scotian Shelf)
81/52 (stock assessment, yield predictions, NAFO Div. 4RS, NW Atl.)
81/53 (stock assessment, yield predictions, NAFO Div. 2J, Div. 3KL, NW Atl.)
- 81/54 (stock assessment, yield predictions, St. Pierre Bank, NW Atl.)
81/62 (catch statistics, catch/effort, NAFO Div. 4VWX, NW Atl.)
- Flounder, yellowtail (*Limanda ferruginea*)
J 38(7) : 847 (mathematical models, recruitment, yield)
CRD 79/27 (catch/effort, population dynamics, Scotian Shelf)
81/62 (catch statistics, catch/effort, NAFO Div. 4VWX, NW Atl.)
- Fluorine; Fluorine compounds
S 2815 (growth, phytoplankton)
- Food; Food availability; Food consumption
J 38(1) : 10 (feeding behavior, circadian rhythms, pink salmon, B.C.)
(2) : 184 (feeding behavior, brook trout, Cement Creek, CO)
(3) : 257 (feeding behavior, capelin, Gulf of St. Lawrence)
(6) : 662 (interspecific relationships, freshwater fishes, L. Michigan)
(7) : 765 (larvae, brook trout, Atlantic salmon, Matamek R., Que.)
(10) : 1199 (food consumption, evaluation, Atlantic cod, Gulf of St. Lawrence)
(11) : 1357 (food consumption, development, *Daphnia rosea*, B.C.)
M 1612 (Dungeness crab, Hecate Strait, NE Pac.)
CRD 79/15 (feeding behavior, Atlantic herring, NW Atl.)
- Food chains; Food webs
J 38(3) : 280 (pollutants, mathematical models)
(8) : 931 (insecticides, aquatic environment, bluegill)
CRD 79/2 (biological poisons, *Gonyaulax*, Atlantic herring, Bay of Fundy, NW Atl., Gulf of St. Lawrence)
- Foreign fishing
T 1006 (monitoring, sablefish, Pacific hake, NE Pac.)
- Forest industry
J 38(2) : 137 (clear-cutting, predators, streams, Cascade Mts., OR)
T 985 (pesticides, environmental effects, aquatic environment)
- Freshwater fishes (see also names of species)
J 38(9) : 1168 (marking, fins)
(11) : 1405 (activity patterns, circadian rhythms, Cazenovia L., NY)
(12) : 1539 (biogeography, historical account, coregonids, Great Lakes)
(12) : 1856 (population genetics, fishery management, Great Lakes)
S 2753 (mercury, methylation, intestines)
2757 (fishways, hydraulic engineering)

Freshwater lakes

- J 38(10) : 1215 (orthophosphate, flux)
 T 1022 (habitat improvement, nursery grounds, ecology, sockeye salmon, B.C.)
 S 2754 (methylation, mercury, sediments)
 2755 (fallout, cadmium, zinc, lead, Man.)
 2812 (eutrophication, environmental effects, benthos, invertebrates)

Fry (see names of species)

Fundy, Bay of (see Northwest Atlantic Ocean)

G

Gadus morhua (see Cod, Atlantic)*Gammarus* (see Amphipoda)*Gasterosteus aculeatus* (see Stickleback, threespine)

Gear selectivity

- M 1601 (dragrakes, Irish moss, S Gulf of St. Lawrence)
 D 268 (gillnets, yield, Pacific herring, Clayoquot Sound, NE Pac.)
 S 2738 (construction, trawl nets)
 CRD 77/20 (trawl codend, mesh regulations, fishery management, silver hake, Scotian Shelf)
 79/37 (otter trawls, mesh selectivity, Atlantic cod)
 81/3 (gillnets, catch statistics, season regulations, Atlantic salmon, Greenland)
 81/21 (age composition, size distribution, Atlantic herring, S Gulf of St. Lawrence)
 81/43 (otter trawls, mesh size, northern pink shrimp, Labrador)

Gelidium (see Alga, red)

Genera, new (see New genera)

Genetics (see also Fish culture)

- J 38(1) : 59 (genotypes, morphology, environmental effects, ciscoes, Great Lakes)
 (3) : 348 (behavioral responses, water currents, rainbow trout, B.C.)
 (6) : 727 (sex reversal, hormones, carp)
 (12) : 1507 (alleles, population structure, salmonids)

Geographical distribution (see Distribution)

Georgia, Strait of (see Northeast Pacific Ocean)

Geryon quinquedens (see Crab, red)

Gillnets

- D 268 (gear selectivity, yield, Pacific herring, Clayoquot Sound, NE Pac.)

- I 122 (experimental fishing, flying squid, Vancouver I., B.C.)
 CRD 81/13 (aerial surveys, Atlantic herring, S Gulf of St. Lawrence)

Gillraker counts

- J 38(12) : 1497 (phenotypic variations, stock identification, coregonids)

Gills

- J 38(1) : 16 (morphology, temperature effects, rainbow trout)
 (8) : 917 (bioaccumulation, cadmium, water quality, rainbow trout)

Glyptocephalus cynoglossus (see Flounder, witch)Goldeye (*Hiodon alosoides*)

- M 1560 (tagging, migrations, stock identification, Peace-Athabasca Delta, Alta.)
 D 61 (tagging, environmental effects, dams, Peace-Athabasca Delta, Alta.)

Goldfish (*Carassius auratus*)

- J 38(2) : 133 (tracers, samarium isotopes, marking)
 (10) : 1182 (blood, temperature effects)
 (10) : 1281 (samarium isotopes, diets)

Gonyaulax (see Poisons (biological))*Gracilaria* spp. (see Alga, red)

Grand Bank (see Northwest Atlantic Ocean)

Gravel

- T 1020 (emergence, fry, Atlantic salmon)

Grayling, Arctic (*Thymallus arcticus*)

- M 1584 (sport fishing statistics, fishery surveys, Yellowknife R., Hay R., N.W.T.)

Grazing

- J 38(11) : 1339 (seaweeds, interspecific relationships, green sea urchin, American lobster, N.S.)
 S 2744 (ecosystems, zooplankton)

Great Lakes, America (see also names of lakes)

- J 38(1) : 59 (morphology, genotypes, ciscoes)
 (12) : iv (historical account, fishery resources, conferences)
 (12) : 1457-1914 (conferences, population genetics, stock identification)
 (12) : 1464 (population genetics, fishery management)
 (12) : 1466 (fishery management, population dynamics, stocking)
 (12) : 1476 (population genetics, fishery management, fishery resources)
 (12) : 1481 (homing behavior, orientation, population genetics, salmonids, white bass, walleye)
 (12) : 1539 (biogeography, historical account, freshwater fishes)

- (12) : 1759 (subpopulation, migrations, spawning behavior, rainbow trout)
- (12) : 1790 (subpopulation, allopatric populations, morphology, lake whitefish)
- (12) : 1856 (population genetics, fishery management, freshwater fishes)
- (12) : 1877 (population genetics, stocking, fishery management)
- Greenland
S 2777 (population structure, subpopulation, Atlantic salmon, E Greenland)
- CRD 79/3 (stock identification, Atlantic salmon, W Greenland)
- 79/6 (stock identification, mathematical models, weight, Atlantic salmon, W Greenland)
- 79/26 (stock identification, statistical analysis, Atlantic salmon, W Greenland)
- 81/3 (gillnets, mesh selectivity, season regulations, Atlantic salmon)
- 81/28 (geographical distribution, abundance, Atlantic salmon, W Greenland)
- 81/29 (population structure, Atlantic salmon, W Greenland)
- 81/30 (weight, conversion factors, Atlantic salmon, W Greenland)
- Growth
J 38(1) : 77 (temperature effects, *Eurytemora herdmanni*, N.S.)
- (2) : 233 (statistical analysis, Pacific ocean perch, Columbia R., B.C.)
- (2) : 250 (mathematical models, kinetics, PCBs, coho salmon, lake trout)
- (4) : 394 (marking, mathematical models, Pacific halibut, B.C.)
- (4) : 399 (oxygen, coho salmon, sockeye salmon)
- (4) : 449 (environmental conditions, periphyton)
- (6) : 649 (mathematical models, fish culture, salmonids)
- (7) : 841 (sand lance, Grand Bank, NW Atl.)
- (9) : 1052 (environmental effects, light intensity, cell size, green alga)
- (9) : 1128 (mathematical models)
- (12) : 1636 (body size, age composition, Pacific salmon, B.C.)
- (12) : 1672 (stocking, survival, brook trout, lakes, Algonquin Park, Ont.)
- (12) : 1701 (population characteristics, survival, stocking, brook trout, Adirondack Mts., NY)
- T 989 (pond culture, growth, survival, *Gammarus lacustris*)
- M 1578 (stocking organisms, rainbow trout, Polar L., N.W.T.)
- S 2759 (molting, American lobster)
- 2808 (nitrogen, purines, microalgae)
- S 2815 (fluorine, phytoplankton)
- 2850 (pollution effects, trace elements, phytoplankton)
- CRD 77/1 (age determination, Atlantic herring, Gulf of St. Lawrence)
- 78/16 (controlled conditions, Atlantic cod)
- 78/29 (growth curves, molting, American lobster, Nfld.)
- 78/43 (temperature effects, Atlantic herring, Fortune Bay, Nfld.)
- 80/74 (shellfish culture, American lobster)
- Gulf of... (see name of gulf)
- Guppy (*Poecilia reticulata*)
J 38(1) : 23 (zinc, sublethal effects)
- Gymnelus retrodorsalis* (see Pout, aurora)
- H
- Habitat
J 38(2) : 137 (clear-cutting, predators, streams, Cascade Mts., OR)
- (6) : 662 (interspecific relationships, freshwater fishes, L. Michigan)
- (10) : 1220 (interspecific relationships, competitors, brook trout, brown trout, MI)
- (11) : 1363 (mathematical models, stream flow, invertebrates)
- D 159 (rivers, spawning, escapement, Pacific salmon, Bella Bella, B.C.)
- 219 (spawning, Pacific salmon, Statistical Area 8, B.C.)
- 222 (rivers, Pacific salmon, Rivers Inlet, Smith Inlet, B.C.)
- S 2782 (hydraulic structures, environmental effects, macroinvertebrates, Squamish R., Fraser R., B.C.)
- Habitat improvement (fertilization)
T 995 (primary production, oligotrophic lakes, B.C.)
- 1022 (fertilization, nursery grounds, ecology, freshwater lakes, sockeye salmon, B.C.)
- Habitat improvement (physical)
M 1539 (fishery surveys, fishery resources, rivers, Pacific salmon, Vancouver I., B.C.)
- 1595 (spawning grounds, chum salmon, B.C.)
- D 274 (aquatic plants, transplantation, Fraser R. estuary, B.C.)
- Haddock (*Melanogrammus aeglefinus*)
J 38(7) : 847 (mathematical models, recruitment, yield)
- (11) : 1393 (catch/effort, yield predictions, multispecies fisheries, NW Atl.)
- CRD 78/19 (stock assessment, yield)

- predictions, ICNAF Div. 4X, NW Atl.)
 81/24 (stock assessment, yield predictions, NAFO Div. 4X, NW Atl.)
 81/56 (juveniles, geographical distribution, vertical distribution, Scotian Shelf)
- Hake, Pacific (*Merluccius productus*)
 T 1006 (monitoring, foreign fishing, NE Pac.)
 M 1610 (fishery resources, potential resources, population structure, Vancouver I., B.C.)
 D 225 (fishery surveys, catch statistics, cruises, Strait of Georgia, NE Pac.)
- Hake, silver (*Merluccius bilinearis*)
 S 2742 (age determination, otolith reading)
 CRD 77/20 (trawl codend, gear selectivity, mesh regulations, Scotian Shelf)
- Hake, white (*Urophycis tenuis*)
 CRD 81/49 (catch/effort, fishery surveys, biomass, NAFO Div. 4T, NW Atl.)
- Halibut, Atlantic (*Hippoglossus hippoglossus*)
 CRD 79/27 (catch/effort, population dynamics, Scotian Shelf)
- Halibut, Greenland (*Reinhardtius hippoglossoides*) (turbot)
 J 28(6) : 669 (population genetics, biochemical analysis, regional variations, Gulf of St. Lawrence, Bering Sea, NW Atl.)
 CRD 79/9 (population structure, fishery development, Gulf of St. Lawrence)
 79/27 (catch/effort, population dynamics, Scotian Shelf)
 79/48F (fishery development, catch statistics, population characteristics, Gulf of St. Lawrence)
 81/5 (predation, interspecific relationships, northern pink shrimp, Labrador)
 81/26F (stock assessment, population characteristics, NAFO Div. 4RST, NW Atl.)
 81/55 (fishery surveys, geographical distribution, biomass, Gulf of St. Lawrence)
- Halibut, Pacific (*Hippoglossus stenolepis*)
 J 38(4) : 394 (marking, growth, mathematical models, B.C.)
- Halichoerus grypus (see Seal, grey)
- Harvesting; Harvesting machines
 CRD 80/69 (environmental effects, substrata, Irish moss, N.S.)
 80/72 (dragrakes, ecology, Irish moss, Gulf of St. Lawrence)
- Hatcheries (see Fish culture)
- Hatching
 D 267 (eggs, substrata, Pacific herring)
- Heat budget
 J 38(9) : 1153 (water mixing, Gulf of St. Lawrence)
- Heat transfer
 S 2803 (atmospheric motion, mathematical models)
- Heavy metals (see also Pollutants; Pollution; Pollution effects)
 T 999 (acidity, toxicity, freshwater fishes, Ont.)
 S 2767 (pollutants, sea water, sediments, Baffin Bay, Arctic)
- Helicostomella (see Protozoa)
- Hemigrapsus (see Crab, purple shore)
- Hepatopancreas
 T 1027 (chemical pollutants, shellfish culture, American lobster)
- Herbicides
 S 2836 (flurodine, persistence, plant control)
- Herring, Atlantic (*Clupea harengus harengus*)
 J 38(7) : 856 (chemical pollutants, chemical analysis, bioaccumulation)
 (11) : 1393 (catch/effort, yield predictions, multispecies fisheries, NW Atl.)
 T 974 (ichthyoplankton, vertical distribution, abundance, Georges Bank, NW Atl.)
 984 (eggs, fishery surveys, diving, Miramichi Bay, N.B.)
 1008 (environmental impact, dredging, sediments, Miramichi Bay, N.B.)
 I 113 (curing, smoker-dryer, bloater, Maritime Provinces)
 S 2750 (cold storage, fishery products)
 2758 (fats, alcohols, biochemical composition)
 2811 (pollution effects, avoidance, dredge spoils, Miramichi R. estuary, N.B.)
 CRD 77/1 (population structure, age determination, growth, Gulf of St. Lawrence)
 77/2 (stock assessment, yield predictions, Gulf of St. Lawrence)
 77/3 (stock assessment, yield predictions, W Nfld.)
 77/6 (stock assessment, yield predictions, ICNAF Div. 5Y, 5Z, Statistical Area 6, NW Atl.)
 77/10 (stock assessment, yield predictions, ICNAF Div. 4V, NW Atl.)
 77/11 (stock assessment, yield predictions, ICNAF Div. 4WX, NW Atl.)

- 77/12 (stock assessment, yield predictions, E Nfld.)
- 77/29 (stock assessment, yield predictions, Fortune Bay, Nfld.)
- 77/30 (stock assessment, yield predictions, Placentia Bay, St. Mary's Bay, Nfld.)
- 78/2 (stock assessment, quota regulations, fishery management, W Nfld.)
- 78/3 (stock assessment, population dynamics, population structure, S Gulf of St. Lawrence)
- 78/4 (stock assessment, population dynamics, Gulf of St. Lawrence)
- 78/5 (population dynamics, environmental effects, Northumberland Strait, Gulf of St. Lawrence)
- 78/25 (stock assessment, yield predictions, ICNAF Div. 4WX, NW Atl.)
- 78/34 (stock assessment, yield predictions, SE Nfld.)
- 78/43 (growth, temperature effects, Fortune Bay, Nfld.)
- 78/44 (stock assessment, population structure, catch statistics, St. Lawrence R. estuary)
- 78/45 (meristic counts, statistical analysis, stock identification, NW Atl.)
- 79/2 (biological poisons, food chains, Gonyaulax, Bay of Fundy, NW Atl., Gulf of St. Lawrence)
- 79/5 (stock assessment, yield predictions, W Nfld.)
- 79/15 (food, feeding behavior, NW Atl.)
- 79/16 (stock assessment, yield predictions, E Nfld.)
- 79/19 (stock assessment, yield predictions, ICNAF Div. 4WX, NW Atl.)
- 79/28 (stock assessment, population dynamics, yield predictions, S Gulf of St. Lawrence)
- 79/29 (trap nets, catch/effort, Gulf of St. Lawrence)
- 79/30 (stock assessment, yield predictions, ICNAF Div. 4W, Subdiv. 4Vs, NW Atl.)
- 79/32 (geographical distribution, migrations, juveniles, Bay of Fundy, NW Atl.)
- 79/35 (stock assessment, yield predictions, Fortune Bay, Nfld.)
- 79/36 (stock assessment, yield predictions, St. Mary's Bay, Placentia Bay, Nfld.)
- 79/40 (stock assessment, yield predictions, ICNAF Subdiv. 4Vn, NW Atl.)
- 79/44 (stock assessment, ichthyoplankton surveys, statistical analysis, ICNAF Div. 4WX, NW Atl.)
- 79/45 (statistical analysis, population characteristics, ICNAF Div. 4WX, NW Atl.)
- 80/75 stock assessment, St. Mary's Bay, Placentia Bay, Nfld.)
- 80/76 (stock assessment, population structure, fishery management, Fortune Bay, Nfld.)
- 81/4 (catch statistics, catch/effort, coastal fisheries, Gulf of St. Lawrence)
- 81/9 (stock assessment, yield predictions, catch/effort, W Nfld.)
- 81/10 (stock assessment, yield predictions, NAFO Div. 4WX, NW Atl.)
- 81/12 (fishing effort, catch/effort, S Gulf of St. Lawrence)
- 81/13 (aerial surveys, gillnets, S Gulf of St. Lawrence)
- 81/21 (age composition, size distribution, gear selectivity, S Gulf of St. Lawrence)
- 81/32 (population characteristics, fishing effort, Magdalen Is., Que.)
- 81/42 (stock assessment, yield predictions, E Nfld.)
- 81/44 (stock assessment, population characteristics, NAFO Subdiv. 4Vn, NW Atl.)
- 81/61 (exploratory fishing, NAFO Div. 4T, NW Atl.)
- Herring, blueback (*Alosa aestivalis*)
J 38(5) : 544 (scales, taxonomy, West R., N.S.)
- Herring, lake (*Coregonus artedii*) (cisco)
J 38(12) : 1808 (population genetics, stock identification, morphology, L. Superior)
- Herring, Pacific (*Clupea harengus pallasii*)
(*Clupea pallasii*)
J 38(4) : 381 (spawning, eggs, B.C.)
T 998 (sexual maturity, development, B.C.)
- 1000 (stock assessment, yield predictions, data processing, B.C.)
- 1009 (fecundity, regional variations, annual variations, B.C.)
- 1016 (mesh selectivity, roe yield, mathematical models)
- 1021 (stock identification, morphology, meristic counts, B.C.)
- M 1592 (spawning grounds, aerial photography, aquatic plants, Kildid Sound, NE Pac.)
- 1597 (stock assessment, yield predictions, B.C.)
- 1600 (surveys, diving, eggs, B.C.)
- 1603 (stock assessment, computer programs, yield predictions, B.C.)
- 1605 (fishery surveys, echo surveys, Queen Charlotte Sound, NE Pac.)
- 1617 (aquatic plants, mapping, spawning grounds, Vancouver I., B.C.)

- 1619 (aquatic plants, mapping, spawning grounds, Queen Charlotte Is., B.C.)
- D 228 (landing statistics, 1970-71, B.C.)
- 229 (biological sampling, population structure, 1970-71, B.C.)
- 230 (biological sampling, population structure, 1978-79, B.C.)
- 231 (landing statistics, 1971-72, B.C.)
- 232 (landing statistics, 1972-73, B.C.)
- 233 (landing statistics, 1973-74, B.C.)
- 234 (landing statistics, 1974-75, B.C.)
- 235 (landing statistics, 1975-76, B.C.)
- 236 (landing statistics, 1976-77, B.C.)
- 237 (landing statistics, 1977-78, B.C.)
- 238 (landing statistics, 1978-79, B.C.)
- 239 (landing statistics, 1979-80, B.C.)
- 242 (biological sampling, population structure, 1971-72, B.C.)
- 243 (biological sampling, population structure, 1972-73, B.C.)
- 244 (biological sampling, population structure, 1973-74, B.C.)
- 245 (biological sampling, population structure, 1974-75, B.C.)
- 246 (biological sampling, population structure, 1975-76, B.C.)
- 247 (biological sampling, population structure, 1976-77, B.C.)
- 248 (biological sampling, population structure, 1977-78, B.C.)
- 249 (biological sampling, population structure, 1979-80, B.C.)
- 250 (stock assessment, population structure, 1970s, B.C.)
- 253 (fecundity, biological data, B.C.)
- 256 (catch statistics, biological sampling, population structure, 1970-80, B.C.)
- 257 (spawning, spawning grounds, biological data, 1970s, B.C.)
- 265 (fishery surveys, fishery resources, roe, Hecate Strait, NE Pac., Dixon Entrance, B.C.)
- 267 (hatching, eggs, substrata)
- 268 (gear selectivity, gillnets, yield, Clayoquot Sound, NE Pac.)
- I 120 (catch statistics, roe, 1978-79, B.C.)
- 125 (tagging, stock identification, migrations, B.C.)
- S 2791 (processing fishery products, biodegradation, lipids)
- Heteromastus* (see *Polychaeta*)
- Heterotrophy
- T 994 (bacteria, oligotrophic lakes, B.C.)
- M 1611 (bacteria, abundance, biodegradation, Cape Hatt, N.W.T.)
- Hiodon alosoides* (see *Coldeye*)
- Hippoglossoides platessoides* (see *Plaice*, American)
- Hippoglossus hippoglossus* (see *Halibut*, Atlantic)
- stenolepis* (see *Halibut*, Pacific)
- Hirudinea (leeches)
- S 2809 (distribution, identification keys, check lists, Bay of Fundy, NW Atl.)
- Historical account
- J 38(12) : iv (fishery resources, foreword, conferences, Great Lakes)
- (12) : 1539 (biogeography, freshwater fishes, coregonids, Great Lakes)
- (12) : 1657 (fishery management, stock identification, Pacific salmon, B.C.)
- (12) : 1724 (stock identification, subpopulation, lake trout, L. Superior)
- (12) : 1747 (population genetics, subpopulation, lake trout, L. Michigan)
- M 1599 (catch/effort, Pacific ocean perch, Queen Charlotte Sound, NE Pac.)
- S 2787 (whaling, sociological aspects, bowhead whale, Bering Sea)
- Holophryxus alaskensis* (Isopoda)
- J 38(11) : 1438 (developmental stages, new records, parasitism, *Pasiphaea pacifica*, Prince William Sound, AK)
- Homarus americanus* (see *Lobster*, American)
- Homing behavior
- J 38(12) : 1481 (population genetics, salmonids, white bass, walleye, Great Lakes)
- Horizontal distribution (see *Distribution*)
- Hormones
- J 38(6) : 727 (methyltestosterone, sex reversal, carp)
- S 2768 (induced breeding, fish culture, pacu)
- Howe Sound (see *Northeast Pacific Ocean*)
- Hudson Bay, Canada
- J 38(11) : 1385 (phytoplankton, algal blooms, sea ice, Manitounuk Sound)
- Human food
- T 914 (aromatics, pollution effects,

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- Hunting
S 2842 (sociological aspects, economic analysis, Inuit, Arctic)
- Huron, Lake, America
J 38(1) : 1 (nutrients, chlorophylls, limiting factors)
(12) : 1772 (population genetics, subpopulation, phenotypes, lake whitefish)
T 918 (phytoplankton, check lists, biomass, Georgian Bay, North Channel)
- Hyas araneus* (see Crab, toad)
coarctatus (see Crab, toad)
- Hybrids; Hybrid culture
J 38(4) : 432 (reproductive behavior, splake, Jack L., Ont.)
(5) : 552 (Atlantic salmon, brown trout, Stewiacke R., N.S.)
(8) : 939 (subpopulation, cutthroat trout, rainbow trout, CA)
- Hydraulic engineering
S 2782 (environmental effects, habitat, macroinvertebrates, Squamish R., Fraser R., B.C.)
- Hydrocarbons (see also Pollutants; Pollution; Pollution effects)
J 38(11) : 1350 (hexachlorobenzene, kinetics, excretion, rainbow trout, L. Ontario)
T 914 (aromatics, fishery products, pollution effects)
S 2837 (chemical extraction, chromatographic techniques, fishes)
- Hydrography
D 279 (physicochemical properties, horizontal contours, cruises, NE Pac. coast)
280 (physicochemical properties, vertical contours, cruises, NE Pac. coast)
281 (physicochemical properties, vertical profiles, cruises, NE Pac. coast)
- Hydrology
M 1620 (water budget, reservoirs, Southern Indian L., Man.)
D 273 (data, watersheds, N.W.T.)
285 (environmental data, meteorological data, Experimental Lakes Area, NW Ont.)
- Hydrurga leptonyx* (see Seal, leopard)
- Ichthyoplankton; Ichthyoplankton surveys
J 38(1) : 120 (entrainment, screens, L. Michigan)
T 974 (vertical distribution, abundance, Atlantic herring, Georges Bank, NW Atl.)
D 275 (cruises, NE Pac. coast)
276 (cruises, NE Pac. coast)
277 (cruises, NE Pac. coast)
278 (cruises, NE Pac. coast)
CRD 79/24 (population structure, biomass, capelin, Gulf of St. Lawrence)
79/44 (statistical analysis, stock assessment, Atlantic herring, ICNAF Div. 4WX, NW Atl.)
79/46 (statistical analysis, yield predictions, Atlantic mackerel, ICNAF Subareas 3-6, NW Atl.)
- ICNAF (International Commission for the Northwest Atlantic Fisheries)
- Ictalurus punctatus* (see Catfish, channel)
- Identification keys
J 38(7) : 821 (eelpouts, Arctic)
B 209 (taxonomy, Polychaeta, B.C., WA)
S 2809 (Hirudinea, Bay of Fundy, NW Atl.)
- Illex illecebrosus* (see Squid, short-finned)
- India
S 2851 (photosynthesis, primary production, phytoplankton, Lawson's Bay)
- Indicators; Indicator species
J 38(9) : 1059 (body size, metals, pollution monitoring, little macoma, San Francisco Bay, CA)
- Industrial wastes (see also Pollutants; Pollution; Pollution effects)
J 38(7) : 739 (pulp, chemical composition, toxicity, rainbow trout)
- Information handling
SP 53 (oceans, Canada)
- Inhibitors
J 38(10) : 1283 (thiourea, thyroid gland, rainbow trout)
- Insecta (see Aquatic insects)
- International cooperation
J 38(12) : 1882 (resource conservation, fishery resources, monitoring, salmonids, World Waters)
- Interspecific relationships
J 38(2) : 245 (competitors, steelhead trout, Atlantic salmon, Gulf of St. Lawrence)

- (3) : 257 (predators, capelin, Arctic cod, short-finned squid, Gulf of St. Lawrence) 2784 (oil spills, pollution effects, Alta.)
- (3) : 275 (predators, *Bosmina longirostris*, *Ceriodaphnia reticulata*, *Epischura lacustris*) 2785 (oil spills, pollution effects, Alta.)
- (3) : 360 (predators, salmonids, northern squawfish, Willamette R., OR) 2812 (eutrophication, environmental effects, benthos, freshwater lakes)
- (4) : 458 (biomass, phytoplankton, zooplankton, lakes) 2826 (cadmium, bioaccumulation)
- (6) : 662 (habitat, food, freshwater fishes, L. Michigan) Ions S 2806 (copper, sensors)
- (10) : 1220 (competitors, habitat, brown trout, brook trout, MI) Irminger Sea S 2777 (population structure, subpopulation, Atlantic salmon)
- (10) : 1228 (competitors, rainbow trout, cutthroat trout, B.C.) Isopoda (see names of species)
- (10) : 1264 (predation, vision, bluegill) Isotopes J 38(2) : 133 (tracers, samarium, marking, medaka, goldfish)
- (10) : 1271 (ecological associations, invertebrates, streams, NC) (10) : 1281 (tracers, samarium, diets, medaka, goldfish)
- (11) : 1339 (grazing, seaweeds, green sea urchin, American lobster, N.S.) J
- T 988 (life history, mathematical models, Atlantic cod, Atlantic mackerel, Gulf of St. Lawrence) Juveniles (see names of species)
- 1029 (agonistic behavior, territoriality, juveniles, coho salmon, Atlantic salmon, brook trout, steelhead trout) K
- S 2766 (feeding behavior, golden eagle, coyote, Jasper National Park, Alta.) Keratella (see Rotifera)
- CRD 81/2 (predators, capelin, Atlantic salmon, NW Atl.) Keys, identification (see Identification keys)
- 81/5 (predation, Greenland halibut, northern pink shrimp, Labrador) Kidney J 38(5) : 547 (bacterial kidney disease, brook trout, brown trout, rainbow trout, WY)
- Intertidal environment Kildidit Sound (see Northeast Pacific Ocean)
- T 928 (ecosystems, ecology, Pecks Cove, Bay of Fundy, NW Atl.) Kinetics J 38(2) : 224 (phosphorus cycle, phytoplankton, L. Superior)
- 965 (quantitative distribution, *Corophium volutator*, *Heteromastus filiformis*, *Maccoma balthica*, Bay of Fundy, NW Atl.) (2) : 250 (pollution effects, PCBs, coho salmon, lake trout)
- Introduced species (11) : 1350 (hexachlorobenzene, salmonids, L. Ontario)
- J 38(8) : 989 (life history, population structure, opossum shrimp, subalpine lakes, CA)
- T 986 (cannibalism, pink salmon, E coast, Canada) Kiyi (*Coregonus kiyi*) J 38(2) : 1808 (population genetics, stock identification, morphology, L. Superior)
- Invertebrates (see also names of species) L
- J 38(8) : 896 (size distribution, seasonal variations, bioenergetics, bluegill, Lawrence L., MI)
- (10) : 1271 (interspecific relationships, ecological associations, streams, NC)
- (11) : 1363 (mathematical models, habitat, stream flow)
- SP 54 (cultured freshwater organisms, manuals)
- S 2743 (toxicity tests, bioassays)
- 2782 (hydraulic structures, environmental effects, habitat, Squamish R., Fraser R., B.C.) Labrador, Nfld. J 38(11) : 1327 (development, mortality, environmental effects, eggs, capelin)
- (12) : 1601 (population characteristics, environmental effects, Atlantic salmon)
- T 1007 (catch statistics, commercial fishing, Atlantic salmon)
- M 1589 (fishery resources, fishery management, Arctic char)

- 1590 (sport fishing, fishery resources, fishery management, Atlantic salmon)
- D 220 (catch statistics, commercial fishing, 1969-72, Atlantic salmon)
- 221 (catch statistics, commercial fishing, 1979, Atlantic salmon)
- 263 (catch statistics, catch/effort, angling, Atlantic salmon)
- 282 (catch statistics, commercial fishing, 1977, Atlantic salmon)
- 283 (catch statistics, commercial fishing, 1978, Atlantic salmon)
- CRD 78/1 (stock assessment, yield predictions, fishery development, northern pink shrimp)
- 79/1 (stock assessment, fishery management, northern pink shrimp)
- 79/4 (catch statistics, fishery surveys, northern pink shrimp)
- 79/5 (predation, interspecific relationships, Greenland halibut, northern pink shrimp)
- 81/7 (stock assessment, yield predictions, northern pink shrimp)
- 81/14 (stock assessment, population characteristics, catch/effort, Arctic char)
- 81/43 (fishing gear, gear selectivity, northern pink shrimp)
- Labrador Sea
- D 213 (primary production, phytoplankton, nutrients)
- CRD 79/3 (stock identification, Atlantic salmon)
- Lagenorhynchus acutus* (see Dolphin, white-sided)
- Lake... (see name of lake)
- Lamprey, sea (*Petromyzon marinus*)
- J 38(10) : 1285 (pest control, sterilization, bisazir)
- (12) : 1708 (population genetics, stock identification, NE Canada, NE USA)
- (12) : 1832 (stock identification, population genetics, subpopulation, L. Superior)
- Lancaster Sound (see Arctic)
- Lance, sand (*Ammodytes dubius*)
- J 38(7) : 841 (growth, Grand Bank, NW Atl.)
- S 2749 (distribution, larvae, new records, Bay of Fundy, NW Atl.)
- Landing statistics (see Fish catch statistics; also Shellfish catch statistics)
- Larval development
- T 927 (temperature effects, Atlantic mackerel)
- Latitudinal variation
- J 38(7) : 806 (spawning migrations, bioenergetics, American shad, St. Johns R., FL, York R., VA, Connecticut R., CT)
- Leaching
- J 38(2) : 193 (biochemical composition, seaweed products, brown alga)
- Lead; Lead compounds
- S 2775 (fallout, lakes, Man.)
- 2810 (bioaccumulation, sediments, invertebrates)
- Leeches (see Hirudinea)
- Length-weight relationships
- CRD 78/9 (population structure, Atlantic cod, ICNAF Subdiv. 3Ps, 3Pn, 4Rs, NW Atl.)
- Lepomis macrochirus* (see Bluegill)
- Lesions
- T 1018 (skin, Atlantic salmon, Nfld.)
- Life cycle; Life history
- J 38(8) : 968 (reproduction, flatfishes, Peruvian anchovy)
- (8) : 989 (introduced species, population structure, opossum shrimp, subalpine lakes, CA)
- (10) : 1173 (Pacific surf clam, Bering Sea)
- (12) : 1759 (subpopulation, migrations, spawning behavior, rainbow trout, Great Lakes)
- (12) : 1790 (allopatric populations, subpopulation, morphology, lake whitefish, Great Lakes)
- T 988 (interspecific relationships, mathematical models, Atlantic cod, Atlantic mackerel, Gulf of St. Lawrence)
- M 1589 (fishery resources, Arctic char, N Labrador)
- S 2781 (bioenergetics, *Eogammarus*, Squamish R. estuary, B.C.)
- 2794 (population structure, white-sided dolphin, NW Atl.)
- CRD 80/81 (catch statistics, swordfish, E coast, Canada)
- Light intensity
- J 38(9) : 1052 (growth, environmental effects, cell size, green alga)
- S 2746 (photosynthesis, phytoplankton, Canadian Arctic, N.S., Peru)
- Limanda ferruginea* (see Flounder, yellowtail)
- Limnology (see also Experimental Lakes Area, Northwestern Ontario; also Water quality)
- J 38(4) : 414 (phosphorus, mathematical models, trophic structure, lakes)
- (4) : 449 (growth, environmental conditions, periphyton)
- T 966 (physical, chemical, freshwater ecology, Y.T.)

- 995 (habitat improvement, primary production, oligotrophic lakes, B.C.)
- D 259 (light penetration, primary production, Experimental Lakes Area, NW Ont.)
- 260 (phytoplankton, chlorophylls, carbon, Experimental Lakes Area, NW Ont.)
- 285 (hydrometeorological data, Experimental Lakes Area, NW Ont.)
- Lipids
- J 38(3) : 367 (diets, nutrition, coho salmon)
- (5) : 518 (arsenic, biochemical modification, metabolism, *Dunaliella tertiolecta*)
- S 2758 (alcohol, biochemical composition, capelin, Atlantic herring, Atlantic mackerel)
- 2791 (processing fishery products, biodegradation, Pacific herring)
- Literature reviews
- J 38(12) : 1515 (population genetics, organismal evolution, molecular evolution)
- (12) : 1838 (stock identification, population genetics, methodology, fishes)
- T 997 (catch statistics, catch/effort, American lobster, Grand Manan I., N.B.)
- M 1613 (fishery resources, bibliographies, Beaufort Sea, Mackenzie Delta, N.W.T.)
- Lobodow carcinophagus* (see Seal, crab-eater)
- Lobster, American (*Homarus americanus*)
- J 38(3) : 268 (chemoreception, drilling mud, pollution effects)
- (11) : 1339 (interspecific relationships, grazing, seaweeds, green sea urchin, N.S.)
- T 963 (cadmium, bioaccumulation, Belledune Harbour, N.B.)
- 973 (ecological associations, multispecies fisheries, Irish moss, sea scallop, Borden, P.E.I.)
- 997 (catch statistics, catch/effort, literature reviews, Grand Manan I., N.B.)
- 1027 (chemical pollutants, hepatopancreas, shellfish culture)
- M 1525 (yield predictions, computer programs)
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- 2826 (cadmium, bioaccumulation)
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- CRD 77/31 (larvae, distribution, Scotian Shelf)
- 78/29 (growth curves, molting, Nfld.)
- 78/30 (yield, computer programs, mathematical models, growth, Nfld.)
- 78/31 (stock assessment, yield, size-limit regulations, Nfld.)
- 78/37 (catch statistics, population structure, migrations, SW N.S.)
- 80/43 (sexual maturity, reproduction, body size)
- 80/44 (sexual maturity, body size)
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- 80/57 (size distribution, regional variations, NW Atl.)
- 80/66 (marking, stock identification, aquaculture techniques)
- 80/71 (ecological associations, multispecies fisheries, sea scallop, Irish moss, Borden, P.E.I.)
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- J 38(3) : 353 (aquatic insects, ecological succession, Appalachian streams, NC)
- (5) : 495 (reproduction, population dynamics, harp seal, NW Atl.)
- Lycodes eudipleurostictus* (see Eelpout, doubleline)
- frigidus* (see Eelpout, cold water)
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- Mackerel, Atlantic (*Scomber scombrus*)
- J 38(7) : 856 (chemical pollutants, chemical analysis, bioaccumulation)
- T 927 (temperature effects, embryos, larvae)
- 988 (interspecific relationships, recruitment, mathematical models, Atlantic cod, Gulf of St. Lawrence)
- S 2750 (cold storage, fishery products)
- 2758 (fats, alcohols, biochemical composition)
- CRD 77/7 (population structure, migrations, geographical distribution, ICNAF Subareas 4, 5, NW Atl.)
- 78/17 (fishery management, mathematical models, biological characteristics, NW Atl.)
- 78/35 (mortality, statistical analysis, NW Atl.)
- 79/31 (eggs, spawning, stock assessment, Gulf of St. Lawrence)
- 79/46 (ichthyoplankton surveys, statistical analysis, yield predictions, ICNAF Subareas 3-6, NW Atl.)
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- Macoma, little (*Macoma balthica*)
 J 38(6) : 642 (dams, environmental effects, sedimentation, Cobequid Bay, Bay of Fundy, NW Atl.)
 (9) : 1059 (indicator species, body size, metals, San Francisco Bay, CA)
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 (9) : 1040 (ammonia, bioaccumulation, blue-green alga, lakes)
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 J 38(12) : 1591 (population genetics, stock identification, USSR)
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 (4) : 394 (marking, growth, Pacific halibut)
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 (6) : 678 (recruitment, fishery management, fishes)
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 (7) : 847 (recruitment, yield, South African anchovy, yellowtail flounder, haddock)
 (8) : 1003 (stock assessment, recruitment)
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- (9) : 1113 (stock assessment, production, Pacific salmon)
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- 1016 (mesh selectivity, roe yield, Pacific herring)
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- 2800 (water waves, water currents, Gaspé, Que.)
- 2802 (stock assessment, population number, bowhead whale, Bering Sea)
- 2803 (atmospheric motion, heat transfer)
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- 77/25 (stock assessment, fishery management, hooded seal, Nfld.)
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- 78/17 (fishery management, biological characteristics, Atlantic mackerel, NW Atl.)
- 78/21 (simulation, fishery management, multispecies fisheries, Atlantic cod, Gulf of St. Lawrence)
- 78/30 (yield, growth, computer programs, American lobster, Nfld.)
- 79/6 (stock identification, weight, Atlantic salmon, W Greenland)
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- J 38(10) : 1209 (toxicity, plankton, Experimental Lakes Area, NW Ont.)
- (11) : 1309 (methylmercury, bioaccumulation, oxygen consumption, rainbow trout)
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- 2754 (methylation, lakes, sediments, Clay L., Ont.)
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- J 38(9) : 1027 (benthos, stock assessment, biological sampling, L. Michigan)
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- (7) : 864 (metabolites, production, phytoplankton culture, *Prorocentrum minimum*)
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- (9) : 1059 (pollution monitoring, indicator species, body size, little macoma, San Francisco Bay, CA)
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- (7) : 856 (chemical pollutants, chemical analysis, bioaccumulation, Atlantic herring, Atlantic mackerel)
- (8) : 952 (silicates, bioaccumulation, tissues, lake trout, L. Superior)
- (9) : 1059 (metals, indicator species, body size, little macoma, San Francisco Bay, CA)
- (11) : 1309 (methylmercury, bioaccumulation, oxygen consumption, rainbow trout)
- (11) : 1350 (hexachlorobenzene, kinetics, excretion, rainbow trout, L. Ontario)
- T 914 (aromatics, fishery products, human food)
- 963 (cadmium, blue mussel, American lobster, Belledune Harbour, N.B.)
- 972 (acidification, rivers, Atlantic salmon, N.S.)
- 985 (pesticides, aquatic environment, environmental effects)
- 993 (pesticides, microbiology, algae, ponds, N.B.)
- 1008 (dredging, sediments, Atlantic herring, Miramichi Bay, N.B.)
- 1027 (chemical pollutants, hepatopancreas, shellfish culture, American lobster)
- 1033 (coal dust, oxygen consumption, respiration, Dungeness crab)
- S 2767 (heavy metals, sediments, Baffin Bay, Arctic)
- 2775 (zinc, cadmium, lead, lakes, Man.)
- 2784 (oil spills, colonization, bacteria, invertebrates, Alta.)
- 2785 (oil spills, bacteria, invertebrates, Alta.)
- 2811 (avoidance, dredge spoils, Atlantic herring, Miramichi R. estuary, N.B.)
- 2829 (pollution detection, biodegradation, PCBs)
- 2830 (chlorine compounds, bioaccumulation)
- 2850 (trace elements, growth, phytoplankton)
- CRD 81/8 (oil production, offshore fisheries)
- Pollution monitoring
- T 1023 (atmospheric precipitations, St. Andrews, N.B.)
- M 1615 (fisheries, E coast, Canada)
- Polyarthra* (see Rotifera)
- Polychaeta* (see also names of species)
- J 38(6) : 633 (new records, distribution, Cossuridae, Maldanidae, B.C., WA)
- B 209 (taxonomy, identification keys, geographical distribution, Sedentaria, Archiannelida, B.C., WA)
- T 965 (distribution, abundance, intertidal environment, *Heteromastus filiformis*, Bay of Fundy, NW Atl.)
- Polychlorinated biphenyls (PCBs)
- J 38(2) : 250 (pollution effects, growth, mathematical models, coho salmon, lake trout)
- (3) : 280 (pollutants, food chains, mathematical models)

- S 2829 (biodegradation, pollution detection)
- Polymorphism
J 38(12) : 1715 (population genetics, environmental effects, largemouth bass, USA)
(12) : 1738 (population genetics, genome, subpopulation, lake trout, L. Superior)
- Pontoporeia* (see *Amphipoda*)
- Population characteristics
J 38(12) : 1601 (environmental effects, natural selection, Atlantic salmon, Que., Nfld., Labrador)
(12) : 1701 (stocking, growth, survival, brook trout, Adirondack Mts., NY)
(12) : 1814 (subpopulation, fishery management, population genetics, walleye, North America)
T 982 (natural populations, fishes, Nashwaak R. watershed, N.B.)
1024 (smolts, Atlantic salmon, Western Arm Brook, Nfld.)
1031 (population dynamics, population structure, walleye pollock, B.C.)
CRD 78/10 (winter, redfishes, ICNAF Div. 4RST, Subdiv. 3Pn, NW Atl.)
78/11 (stock assessment, American plaice, ICNAF Subarea 2, Div. 3K, NW Atl.)
78/33 (tagging, age composition, fishery management, harp seal, NW Atl.)
78/42 (stock assessment, fishery management, sea scallop, Northumberland Strait, Gulf of St. Lawrence)
79/43 (stock assessment, yield predictions, sea scallop, Bay of Fundy, NW Atl.)
79/45 (statistical analysis, Atlantic cod, American plaice, Atlantic herring, NW Atl.)
79/48F (fishery development, catch statistics, Greenland halibut, Gulf of St. Lawrence)
79/49 (inshore fisheries, stock assessment, Atlantic cod, ICNAF Subdiv. 4Vn, NW Atl.)
79/50 (geographical distribution, cods, Arctic)
79/51 (stock assessment, yield predictions, American plaice, ICNAF Div. 4T, NW Atl.)
81/14 (stock assessment, Arctic char, N Labrador)
81/26F (stock assessment, Greenland halibut, NAFO Div. 4RST, NW Atl.)
81/32 (Atlantic herring, Magdalen Is., Que.)
81/35 (stock assessment, bluefin tuna, NW Atl.)
81/44 (stock assessment, Atlantic herring, NAFO Subdiv. 4Vn, NW Atl.)
- Population density
J 38(1) : 91 (mathematical models, striped bass, white perch, Atlantic tomcod)
(9) : 1141 (statistical sampling, echo surveys, variability)
- Population dynamics
J 38(1) : 84 (production, pups, northern fur seal, St. Paul I., AK)
(4) : 424 (stock assessment, multispecies fisheries, population structure, fishes)
(5) : 485 (sublethal effects, pesticides, *Eurytemora affinis*, *Daphnia pulex*)
(5) : 495 (reproduction, long term changes, harp seal, NW Atl.)
(11) : 1339 (American lobster, N.S.)
(12) : 1466 (fishery management, Great Lakes)
T 1008 (environmental impact, dredging, sediments, Atlantic herring, Miramichi Bay, N.B.)
1009 (fecundity, regional variations, annual variations, Pacific herring, B.C.)
1031 (population characteristics, population structure, walleye pollock, B.C.)
M 1607 (stock assessment, yield, bar clam, Northumberland Strait, Gulf of St. Lawrence)
CRD 77/8 (bioenergetics, Atlantic cod, Gulf of St. Lawrence)
77/21 (population structure, harp seal, NW Atl.)
77/23 (breeding, stock assessment, hooded seal, NW Atl.)
77/24 (production models, harp seal, NW Atl.)
78/3 (stock assessment, population structure, Atlantic herring, S Gulf of St. Lawrence)
78/4 (stock assessment, Atlantic herring, Gulf of St. Lawrence)
78/5 (environmental effects, diseases, Atlantic herring, Northumberland Strait, Gulf of St. Lawrence)
78/6 (catch statistics, by catch, witch flounder, St. Pierre Bank, NW Atl.)
78/14 (stock assessment, mathematical models, American plaice, Gulf of St. Lawrence)
78/36 (tagging, hooded seal, Gulf of St. Lawrence)
79/27 (catch/effort, flatfishes, Scotian Shelf)
79/28 (stock assessment, yield predictions, Atlantic herring, S Gulf of St. Lawrence)
- Population genetics
J 38(1) : 32 (endemic species, Arctic char, America)
(3) : 308 (morphology, growth, migrations, Atlantic salmon, Miramichi R., N.B.)

- (3) : 321 (phenotypes, acclimatization, Atlantic salmon, Miramichi R., N.B.)
- (6) : 669 (biochemical analysis, subpopulation, regional variations, Greenland halibut, Gulf of St. Lawrence, Bering Sea, NW Atl.)
- (7) : 744 (stock identification, analytical techniques, scales, sockeye salmon)
- (7) : 782 (subpopulation, population structure, witch flounder, Nfld.)
- (9) : 1120 (environmental effects, bioselection, *Gammarus lawrencianus*)
- (12) : 1457-1914 (conferences, stock identification, fishery management, Great Lakes)
- (12) : 1459 (evolution, resource management)
- (12) : 1464 (fishery management, Great Lakes)
- (12) : 1469 (fishery management, Pacific salmon, B.C.)
- (12) : 1476 (fishery management, stock identification, fishery resources, Great Lakes)
- (12) : 1479 (stock concept, terminology)
- (12) : 1481 (homing behavior, orientation, salmonids, white bass, walleye, Great Lakes)
- (12) : 1507 (alleles, population structure, salmonids)
- (12) : 1515 (organismal evolution, molecular evolution, literature reviews)
- (12) : 1523 (biochemistry, fishery management, fishes)
- (12) : 1562 (population structure, natural populations, salmonids, Scandinavia)
- (12) : 1576 (population structure, fishery management, Atlantic salmon, British Isles, Eire)
- (12) : 1591 (marine fishes, stock identification, USSR)
- (12) : 1612 (phenotypic variations, Atlantic salmon, Atlantic Provinces, New England)
- (12) : 1626 (stock identification, speciation, salmonids)
- (12) : 1665 (fish culture, breeding, Pacific salmon, AK)
- (12) : 1685 (fishery management, stocking, lake trout, L. Simcoe, L. Opeongo, Ont.)
- (12) : 1708 (stock identification, sea lamprey, NE Canada, NE USA)
- (12) : 1715 (environmental effects, polymorphism, largemouth bass, USA)
- (12) : 1738 (polymorphism, genome, subpopulation, lake trout, L. Superior)
- (12) : 1747 (subpopulation, historical account, lake trout, L. Michigan)
- (12) : 1772 (subpopulation, phenotypes, population structure, lake whitefish, L. Huron)
- (12) : 1808 (stock identification, morphology, lake herring, bloater, kiyi, shortjaw cisco, L. Superior)
- (12) : 1814 (subpopulation, population characteristics, fishery management, walleye, North America)
- (12) : 1832 (stock identification, subpopulation, sea lamprey, L. Superior)
- (12) : 1838 (stock identification, methodology, literature reviews, fishes)
- (12) : 1856 (fishery management, freshwater fishes, Great Lakes)
- (12) : 1867 (fish culture, fishery management)
- (12) : 1877 (stocking, fishery management, Great Lakes)
- (12) : 1889 (fishery management, subpopulation)
- (12) : 1899 (population structure, environmental impact)
- (12) : 1908 (fishery policy, fishery management, resource conservation)
- Population number
- D 254 (fishways, Atlantic salmon, Beechwood Dam, Saint John R., N.B.)
- S 2795 (parturition, leopard seal, Antarctica)
- 2802 (stock assessment, mathematical models, bowhead whale, Bering Sea)
- CRD 79/38 (stock assessment, yield predictions, grey seal, Gulf of St. Lawrence, Scotian Shelf)
- 79/39 (vertical distribution, Arctic cod, SE Beaufort Sea)
- Population structure
- J 38(3) : 371 (yield predictions, mathematical models, soft-shell clam)
- (4) : 424 (multispecies fisheries, population dynamics, fishes)
- (6) : 627 (age composition, annual variations, statistical analysis, white perch, Hudson R., NY)
- (8) : 989 (introduced species, opossum shrimp, subalpine lakes, CA)
- (12) : 1457-1914 (conferences, population genetics, fishery management, Great Lakes)
- (12) : 1507 (population genetics, alleles, salmonids)
- (12) : 1562 (population genetics, natural populations, salmonids, Scandinavia)
- (12) : 1576 (population genetics, fishery management, Atlantic salmon, British Isles, Eire)
- (12) : 1772 (subpopulation, population genetics, phenotypes, lake whitefish, L. Huron)
- (12) : 1899 (population genetics,

- environmental impact) 78/9 (length-weight relationships, Atlantic cod, ICNAF Subdiv. 3Ps, 3Pn, 4Rs, NW Atl.)
- T 971 (stock assessment, sea scallop, Northumberland Strait, Gulf of St. Lawrence) 78/37 (catch statistics, migrations, American lobster, SW N.S.)
- 1013 (stock assessment, sea scallop, Northumberland Strait, Gulf of St. Lawrence) 78/38 (catch statistics, stock assessment, red crab, Scotian Shelf)
- 1017 (smolts, Atlantic salmon, Western Arm Brook, Nfld.) 79/8 (stock assessment, witch flounder, ICNAF Div. 4RS, NW Atl.)
- 1024 (population characteristics, population dynamics, walleye pollock, B.C.) 79/9 (fishery development, Greenland halibut, Gulf of St. Lawrence)
- 1031 (tagging, sablefish, B.C. coast) 79/13 (catch statistics, stock assessment, witch flounder, ICNAF Subdiv. 3Ps, NW Atl.)
- M 1588 (pink salmon, NE Pac.) 79/17 (distribution sexual maturity, Arctic cod, NW Atl.)
- 1594 (catch statistics, fishery resources, capelin, W Gulf of St. Lawrence) 79/24 (ichthyoplankton surveys, biomass, capelin, Gulf of St. Lawrence)
- 1604F (fishery resources, Pacific hake, Vancouver I., B.C.) 80/76 (stock assessment, fishery management, Atlantic herring, Fortune Bay, Nfld.)
- D 229 (biological sampling, 1970-71, Pacific herring, B.C.) 81/29 (Atlantic salmon, W Greenland)
- 230 (biological sampling, 1978-79, Pacific herring, B.C.)
- 242 (biological sampling, 1971-72, Pacific herring, B.C.)
- 243 (biological sampling, 1972-73, Pacific herring, B.C.)
- 244 (biological sampling, 1973-74, Pacific herring, B.C.)
- 245 (biological sampling, 1974-75, Pacific herring, B.C.)
- 246 (biological sampling, 1975-76, Pacific herring, B.C.)
- 247 (biological sampling, 1976-77, Pacific herring, B.C.)
- 248 (biological sampling, 1977-78, Pacific herring, B.C.)
- 249 (biological sampling, 1979-80, Pacific herring, B.C.)
- 250 (stock assessment, 1970s, Pacific herring, B.C.)
- 251 (fishery surveys, walleye pollock, Queen Charlotte Sound, NE Pac., Dixon Entrance, B.C.)
- 256 (catch statistics, biological sampling, 1970-80, Pacific herring, B.C.)
- 284 (biological sampling, Arctic char, Cambridge Bay, N.W.T.)
- S 2777 (subpopulation, Atlantic salmon, Irminger Sea, E Greenland)
- 2794 (life history, white-sided dolphin, NW Atl.)
- CRD 77/1 (age determination, growth, Atlantic herring, Gulf of St. Lawrence)
- 77/7 (migrations, geographical distribution, Atlantic mackerel, ICNAF Subareas 4, 5, NW Atl.)
- 77/21 (population dynamics, harp seal, NW Atl.)
- 78/3 (stock assessment, population dynamics, Atlantic herring, S Gulf of St. Lawrence)
- 78/7 (stock assessment, witch flounder, ICNAF Div. 4RS, NW Atl.)
- Porphyridium* sp. (see Alga, red)
- Potential resources
- M 1610 (fishery resources, Pacific hake, Vancouver I., B.C.)
- I 121 (fishery development, tunas, NE Pac.)
- CRD 81/6 (exploratory fishing, biomass, striped pink shrimp, E Hudson Strait, Ungava Bay, NW Atl.)
- Pout, aurora (*Gymnelus retrodorsalis*)
- J 38(7) : 821 (new records, geographical distribution, morphology, Arctic)
- Prairie Provinces, Canada (see also Alberta; Manitoba)
- S 2764 (water quality, eutrophic lakes)
- Prawn, spot (*Pandalus platyceros*)
- M 1586 (exploratory fishing, Queen Charlotte Is., B.C.)
- D 224 (catch/effort, NE Pac.)
- Praxillella praeterrissa* (Polychaeta)
- J 38(6) : 633 (new records, distribution, Maldanidae, WA)
- Precipitations (atmospheric)
- T 1023 (acids, pH, St. Andrews, N.B.)
- S 2827 (toxicity, eggs, Atlantic salmon)
- Predation; Predators
- J 38(2) : 137 (habitat, clear-cutting, streams, Cascade Mts., OR)
- (3) : 275 (feeding behavior, *Bosmina longirostris*, *Ceriodaphnia reticulata*, *Epischura lacustris*)
- (3) : 360 (feeding behavior, salmonids, northern squawfish, Willamette R., OR)
- (9) : 1096 (remote sensing, zooplankton)

- (10) : 1264 (feeding behavior, vision, bluegill)
- (11) : 1444 (environmental effects, torrent sculpin, insects)
- S 2796 : (caribou, gray wolf, Baffin I., N.W.T.)
- 2799 : (polar bear, ringed seal, bearded seal, Arctic)
- 2821 : (crabeater seal, killer whale, Paradise Harbour, Antarctica)
- CRD 81/1 : (snow crab, Atlantic cod, Gulf of St. Lawrence)
- 81/2 : (capelin, Atlantic salmon, NW Atl.)
- 81/5 : (interspecific relationships, Greenland halibut, northern pink shrimp, Labrador)
- Predator control (see Pest control)
- Preservation (fishery products)
- T 1002 : (quality control, processing fishery products, snow crab)
- Primary production (see also Phytoplankton)
- J 38(1) : 52 (nannoplankton, boron, Bedford Basin, N.S.)
- (2) : 205 (chlorophylls, chromatographic techniques, sediments)
- (11) : 1421 (phytoplankton, phosphorus)
- T 995 : (habitat improvement, oligotrophic lakes, B.C.)
- 1001 : (phytoplankton, St. Georges Bay, N.S.)
- D 174 : (phytoplankton, nutrients, continental shelf, N.S.)
- 213 : (phytoplankton, Baffin Bay, Davis Strait, Lancaster Sound, Arctic, Labrador Sea, NW Atl.)
- 259 : (light penetration, Experimental Lakes Area, NW Ont.)
- 260 : (phytoplankton, Experimental Lakes Area, NW Ont.)
- S 2823 : (phytoplankton, L. Tanganyika, Africa)
- 2825 : (energy flow, L. Tanganyika, Africa)
- 2851 : (photosynthesis, phytoplankton, Lawson's Bay, India)
- Prince Edward Island (Province), Canada
- T 973 : (ecological associations, multispecies fisheries, Irish moss, American lobster, sea scallop, Borden)
- 1010 : (resource development, stocking density, fishery economics, Atlantic oyster, Dunk R.)
- 1015 : (resource development, shellfish culture, transplantation, Atlantic oyster, Dunk R.)
- M 1587 : (resource management, shellfish culture, Atlantic oyster, Dunk R.)
- 1606 : (stock assessment, fishery management, soft-shell clam)
- 1609 : (shellfish culture, condition factor, seasonal variations, blue mussel, Malpeque Bay)
- CRD 80/71 : (ecological associations, multispecies fisheries, American lobster, sea scallop, Irish moss, Borden)
- Processing fishery products
- T 987 : (roe, quality control, Pacific salmon)
- 1002 : (quality control, preservation, snow crab)
- I 113 : (smoker-dryer, curing, bloater, Atlantic herring, Maritime Provinces)
- S 2791 : (biodegradation, lipids, Pacific herring)
- Production (biological)
- J 38(1) : 77 (temperature effects, *Eurytemora herdmani*, N.S.)
- (1) : 84 (pups, northern fur seal, St. Paul I., AK)
- (2) : 175 (environmental conditions, crayfish, West Lost L., North Twin L., MI)
- (7) : 864 (metabolites, phytoplankton culture, *Prorocentrum minimum*)
- (9) : 1113 (mathematical models, stock assessment, Pacific salmon)
- D 271 : (fish culture, biological data, Atlantic salmon, brook trout, rainbow trout, lake trout, Maritime Provinces)
- CRD 77/22 : (tagging, stock assessment, harp seal, NW Atl.)
- 79/33 : (biological, stock assessment, yield predictions, redfishes, ICNAF Subarea 2, Div. 3K, NW Atl.)
- 79/34 : (biological, catch/effort, stock assessment, redfishes, ICNAF Div. 3Ø, NW Atl.)
- Prorocentrum minimum* (Dinoflagellate)
- J 38(7) : 864 (production, metabolites, culture)
- Protozoa
- J 38(11) : 1316 (phosphorus, bioaccumulation, excretion, *Strombidium viride*, Jack's L., Ont.)
- S 2789 : (cysts, *Helicostomella subulata*, Bedford Basin, N.S.)
- Pseudopleuronectes americanus* (see Flounder, winter)
- Ptychocheilus oregonensis* (see Squawfish, northern)
- Purines
- S 2808 : (nitrogen, growth, microalgae)
- Q
- Quality; Quality assurance; Quality control
- T 987 : (processing fishery products, roe, Pacific salmon)

- 996 (freezing storage, spiny dogfish, NE Pac.)
 1002 (processing fishery products, preservation, snow crab)
- Quebec (Province), Canada (see also Memphremagog, Lake)
 J 38(7) : 765 (feeding behavior, food, larvae, brook trout, Atlantic salmon, Matamek R.)
 (12) : 1601 (population characteristics, environmental effects, Atlantic salmon)
 T 990 (toxicity, conferences, aquatic environment)
 S 2748 (sedimentation, Saguenay Fjord)
 2793 (sedimentation, Saguenay Fjord)
 2800 (water waves, water currents, mathematical models, Gaspé)
 CRD 79/20 (tagging, migrations, Atlantic cod, North Shore)
 81/32 (population characteristics, fishing effort, Atlantic herring, Magdalen Is.)
- Queen Charlotte Islands (see British Columbia)
 Queen Charlotte Sound (see Northeast Pacific Ocean)
 Quota regulations
 CRD 78/2 (stock assessment, fishery management, Atlantic herring, W Nfld.)
- R
- Rangifer tarandus* (see Caribou)
- Recruitment
 J 38(5) : 554 (fish culture, rearing, survival, fishery management, pink salmon, Baranoff I., AK)
 (6) : 678 (mathematical models, fishery management, fishes)
 (6) : 690 (mathematical models, fishery management, fishes)
 (6) : 704 (stock assessment, statistical analysis, fishes)
 (6) : 711 (stock assessment, statistical analysis, fishes)
 (7) : 847 (mathematical models, yield, South African anchovy, yellowtail flounder, haddock)
 (8) : 1003 (stock assessment, mathematical models)
 T 988 (interspecific relationships, mathematical models, Atlantic cod, Atlantic mackerel, Gulf of St. Lawrence)
 1012 (environmental effects, harvesting machines, brown alga, SW N.S.)
 CRD 81/16 (smolts, egg deposition, temperature effects, Atlantic salmon, Western Arm Brook, Nfld.)
- Red tides
 J 38(2) : 152 (biological poisons, *Gonyaulax*, blue mussel, Gulf of Maine, NW Atl.)
- Redfish (*Sebastes marinus*) (Ocean perch)
 J 38(11) : 1393 (catch/effort, yield predictions, multispecies fisheries, NW Atl.)
- Redfish, deepwater (*Sebastes mentella*)
 J 38(8) : 873 (taxonomy, morphology, Grand Bank, NW Atl.)
 CRD 79/41 (stock assessment, yield predictions, ICNAF Div. 4VWX, NW Atl.)
- Redfish, Labrador (*Sebastes fasciatus*)
 J 38(8) : 873 (taxonomy, morphology, Grand Bank, NW Atl.)
- Redfishes (*Sebastes* spp.) [Atl.]
 J 38(8) : 873 (taxonomy, morphology, *Sebastes mentella*, *S. fasciatus*, Grand Bank, NW Atl.)
 CRD 78/8 (juveniles, by catch, northern pink shrimp, fishery, Gulf of St. Lawrence)
 78/10 (winter, population characteristics, ICNAF Div. 4RST, Subdiv. 3Pn, NW Atl.)
 70/20 (stock assessment, yield, ICNAF Div. 3Ø, NW Atl.)
 78/22 (stock assessment, yield predictions, ICNAF Subarea 2, Div. 3K, NW Atl.)
 78/23 (stock assessment, yield predictions, ICNAF Div. 4VWX, NW Atl.)
 79/25 (juveniles, by catch, Esquiman Channel, Gulf of St. Lawrence)
 79/33 (production, stock assessment, yield predictions, ICNAF Subarea 2, Div. 3K, NW Atl.)
 79/34 (production, catch/effort, stock assessment, ICNAF Div. 3Ø, NW Atl.)
 79/42 (stock assessment, yield predictions, ICNAF Div. 3P, NW Atl.)
 81/17 (stock assessment, yield predictions, NAFO Div. 4VWX, NW Atl.)
 81/38 (stock assessment, yield predictions, NAFO Div. 3Ø, NW Atl.)
 81/50 (stock assessment, yield predictions, NAFO Subarea 2, Div. 3K, NW Atl.)
 81/58 (stock assessment, yield predictions, NAFO Div. 4RST, NW Atl.)
 81/59 (stock assessment, yield predictions, NAFO Div. 3P, NW Atl.)
- Reinhardtius hippoglossoides* (see Halibut, Greenland)

- Remote sensing
J 38(9) : 1096 (zooplankton, environmental effects, predation)
- Reports
T 1019 (research programs, 1976-78, Department of Fisheries and Environment, Western Region, Man.)
S 2820 (research programs, Cetacea)
- Reproduction (biology)
J 38(2) : 237 (marine mammals, sexual maturity)
(5) : 495 (population dynamics, long term changes, harp seal, NW Atl.)
(8) : 968 (life history, flatfishes, Peruvian anchovy)
T 960 (bibliographies, salmonids)
1020 (emergence, gravel, fry, Atlantic salmon)
M 1595 (spawning grounds, habitat improvement, chum salmon, B.C.)
S 2760 (American lobster)
2795 (parturition, leopard seal, Antarctica)
2828 (Amphipoda, Bay of Fundy, NW Atl.)
CRD 80/43 (sexual maturity, body size, American lobster)
- Reproductive behavior
J 38(4) : 432 (hybrids, splake, Jack L., Ont.)
- Research programs
T 1019 (reports, 1976-78, Department of Fisheries and Environment, Western Region, Man.)
I 123 (stock assessment, fishery management, molluscs, Maritime Provinces)
S 2820 (reports, Cetacea, Canada)
- Reservoirs (water)
M 1620 (water budget, hydrology, Southern Indian L., Man.)
- Resource conservation
J 38(12) : 1882 (fishery resources, international cooperation, monitoring, salmonids, World waters)
(12) : 1908 (fishery policy, population genetics, fishery management)
- Resource development
T 1010 (stocking density, fishery economics, Atlantic oyster, Dunk R., P.E.I.)
1015 (shellfish culture, transplantation, Atlantic oyster, Dunk R., P.E.I.)
- Resource management (see also Fishery management)
J 38(12) : 1459 (population genetics, evolution)
- T 1005 (conferences, marine mammals, Arctic)
M 1587 (stocking density, shellfish culture, Atlantic oyster, Dunk R., P.E.I.)
CRD 77/18 (shellfish, aquatic plants, E coast, Canada)
- Respiration
T 1033 (pollution effects, coal dust, Dungeness crab)
S 2834 (cadmium, sublethal effects, rainbow trout)
- Rhinichthys atratulus* (see Dace, blacknose)
Roccus saxatilis (see Bass, striped)
- Rockfishes (*Sebastes* spp.) [Pac.] (see also names of species)
M 1605 (fishery surveys, echo surveys, stock assessment, Queen Charlotte Sound, NE Pac.)
D 226 (exploratory fishing, midwater trawls, Vancouver I., B.C.)
266 (exploratory fishing, longlining, Bowie Seamount, Queen Charlotte Is., B.C.)
286 (fishery surveys, biological data, stock assessment, Vancouver I., Langara I., B.C.)
- Roe
T 987 (processing fishery products, quality control, Pacific salmon)
1016 (yield, mesh selectivity, mathematical models, Pacific herring)
D 265 (fishery surveys, fishery resources, Pacific herring, Hecate Strait, NE Pac., Dixon Entrance, B.C.)
I 120 (catch statistics, 1978-79, Pacific herring, B.C.)
- Rotifera
J 38(6) : 721 (culture, *Asplanchna*, *Polyarthra*, *Synchaeta*, *Cryptomonas* spp.)
(11) : 1316 (phosphorus bioaccumulation, excretion, *Keratella cochlearis*, Jack's Lake, Ont.)
- S
- Sablefish (*Anoplopoma fimbria*) (blackcod)
T 1006 (monitoring, foreign fishing, NE Pac.)
M 1588 (tagging, migrations, population structure, B.C. coast)
D 266 (exploratory fishing, longlining, Bowie Seamount, Queen Charlotte Is., B.C.)
- Salicornia* (see Aquatic plants)

- Salinity; Salinity effects
 S 2839 (urine production, purple shore crab) (12) : selection, Que., Nfld., Labrador)
 1612 (phenotypic variations,
 population genetics, fishery
 management, Atlantic Provinces,
 New England)
 (mortality, acidification, rivers,
 N.S.)
 (population characteristics,
 Nashwaak R. watershed, N.B.)
 (catch statistics, commercial
 fishing, Nfld., Labrador)
 (marine aquaculture, cage culture,
 rearing, Deer I., N.B.)
 (lesions, skin, Nfld.)
 (fry, emergence, gravel)
 (population characteristics,
 population structure, smolts,
 Western Arm Brook, Nfld.)
 (interspecific relationships,
 agonistic behavior, territoriality,
 juveniles)
 (sport fishing, fishery resources,
 fishery management, Labrador,
 Nfld.)
 (catch statistics, commercial
 fishing, 1969-72, Labrador, Nfld.)
 (catch statistics, commercial
 fishing, 1979, Labrador, Nfld.)
 (fishways, population number,
 Beechwood Dam, Saint John R., N.B.)
 (sport fishing statistics, catch/
 effort, Maritime Provinces)
 (catch statistics, catch/effort,
 angling, Labrador, Nfld.)
 (fish culture, stocking,
 biological data, Maritime
 Provinces)
 (catch statistics, commercial
 fishing, 1977, Labrador, Nfld.)
 (catch statistics, commercial
 fishing, 1978, Labrador, Nfld.)
 (toxicity, pesticides)
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(10) : 1199 (food consumption, evaluation, bioenergetics, Atlantic cod)
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 J 38(11) : 1371 (colonization, artificial substrate, bacteria, diatoms)
 I 119F (stock assessment, fishery resources, commercial species)
 CRD 78/44 (catch statistics, stock assessment, population structure, Atlantic herring)
- Statistical analysis
 J 38(2) : 233 (growth, Pacific ocean perch, Columbia R., Vancouver I., B.C.)
 (3) : 297 (regression analysis, age composition)
 (6) : 704 (recruitment, stock assessment, fishes)
 (6) : 711 (recruitment, stock assessment, fishes)
 CRD 78/15 (fish catch statistics, age composition)
 78/35 (mortality, Atlantic mackerel, NW Atl.)
 78/45 (meristic counts, stock identification, Atlantic herring, NW Atl.)
 79/26 (stock identification, Atlantic salmon, W Greenland)
 79/44 (ichthyoplankton surveys, stock assessment, Atlantic herring,
- ICNAF Div. 4WX, NW Atl.)
 (population characteristics, Atlantic cod, American plaice, Atlantic herring, NW Atl.)
 79/46 (ichthyoplankton surveys, yield predictions, Atlantic mackerel, ICNAF Subareas 3-6, NW Atl.)
- Sterility
 J 38(10) : 1285 (pest control, bisazir, sea lamprey)
- Steroids
 J 38(9) : 1106 (environmental effects, pollutants, channel catfish)
- Stickleback, threespine (*Gasterosteus aculeatus*)
 S 2841 (bioaccumulation, excretion, chemical compounds)
- Stizostedion vitreum vitreum* (see Walleye)
- Stock assessment
 J 38(6) : 704 (recruitment, statistical analysis, fishes)
 (6) : 711 (recruitment, statistical analysis, fishes)
 (8) : 1003 (recruitment, mathematical models)
 (9) : 1027 (benthos, mesh selectivity, sampling, L. Michigan)
 (9) : 1077 (tag loss, mathematical models)
 (9) : 1113 (mathematical models, production, Pacific salmon)
 (10) : 1173 (potential yield, Pacific surf clam, Bering Sea)
- T 977 (fishery resources, red crab, Georges Bank, NW Atl.)
 1000 (yield predictions, data processing, computer programs, Pacific herring, B.C.)
 1013 (population structure, sea scallop, Northumberland Strait, Gulf of St. Lawrence)
 1014 (yield, sea scallop, S Scotian Shelf)
 1017 (population structure, sea scallop, Northumberland Strait, Gulf of St. Lawrence)
 M 1567 (yield predictions, soft-shell clam, Charlotte Co., N.B.)
 1597 (yield predictions, Pacific herring, B.C.)
 1599 (catch/effort, historical account, Pacific ocean perch, Queen Charlotte Sound, NE Pac.)
 1603 (computer programs, yield predictions, Pacific herring, B.C.)
 1606 (fishery resources, fishery management, soft-shell clam, P.E.I.)
 1607 (population dynamics, yield, bar clam, Northumberland Strait, Gulf of St. Lawrence)
 1616 (commercial fishing, Pacific

- 1618 salmon, steelhead trout, B.C.)
(fishery surveys, red sea urchin, Gulf Is., B.C.)
- D 250 (population structure, 1970s, Pacific herring, B.C.)
- 286 (fishery surveys, biological data, rockfishes, Vancouver I., Langara I., B.C.)
- I 119F (fishery resources, commercial species, St. Lawrence R. estuary)
- 123 (fishery management, research programs, molluscs, Maritime Provinces)
- S 2763 (geographical distribution, sperm whale, N Pac.)
- 2769 (numerical analysis, American lobster, Nfld.)
- 2802 (population number, mathematical models, bowhead whale, Bering Sea)
- 2819 (Cetacea, Arctic)
- CRD 77/2 (yield predictions, Atlantic herring, Gulf of St. Lawrence)
- 77/3 (yield predictions, Atlantic herring, W Nfld.)
- 77/4 (yield predictions, capelin, Gulf of St. Lawrence)
- 77/6 (yield predictions, Atlantic herring, ICNAF Div. 5Y, 5Z, Statistical Area 6, NW Atl.)
- 77/9 (yield predictions, pollock, ICNAF Subarea 5, Div. 4VWX, NW Atl.)
- 77/10 (yield predictions, Atlantic herring, ICNAF Div. 4V, NW Atl.)
- 77/11 (yield predictions, Atlantic herring, ICNAF Div. 4WX, NW Atl.)
- 77/12 (yield predictions, Atlantic herring, E Nfld.)
- 77/13 (yield predictions, American plaice, ICNAF Subdiv. 3Ps, NW Atl.)
- 77/14 (yield predictions, witch flounder, American plaice, Div. 4RS, Subdiv. 3Pn, NW Atl.)
- 77/15 (yield predictions, Atlantic cod, Gulf of St. Lawrence)
- 77/16 (yield predictions, Atlantic cod, ICNAF Subdiv. 3Ps, NW Atl.)
- 77/17 (yield predictions, witch flounder, ICNAF Subdiv. 3Ps, NW Atl.)
- 77/22 (production, tagging, harp seal, NW Atl.)
- 77/23 (population dynamics, breeding, hooded seal, NW Atl.)
- 77/25 (mathematical models, fishery management, hooded seal, Nfld.)
- 77/27 (aerial surveys, harp seal, NW Atl.)
- 77/29 (yield predictions, Atlantic herring, Fortune Bay, Nfld.)
- 77/30 (yield predictions, Atlantic herring, Placentia Bay, St. Mary's Bay, Nfld.)
- 77/32 (yield predictions, sea scallop, ICNAF Subdiv. 5Za, NW Atl.)
- 78/1 (yield predictions, fishery development, northern pink shrimp, Labrador)
- 78/2 (fishery management, quota regulations, Atlantic herring, W Nfld.)
- 78/3 (population dynamics, population structure, Atlantic herring, S Gulf of St. Lawrence)
- 78/4 (population dynamics, Atlantic herring, Gulf of St. Lawrence)
- 78/7 (population structure, witch flounder, ICNAF Div. 4RS, NW Atl.)
- 78/11 (population characteristics, American plaice, ICNAF Subarea 2, Div. 3K, NW Atl.)
- 78/12 (computer programs, marine fishes)
- 78/13 (Atlantic cod, ICNAF Div. 4W, Subdiv. 4Vs, NW Atl.)
- 78/14 (population dynamics, mathematical models, American plaice, Gulf of St. Lawrence)
- 78/18 (yield, Atlantic cod, ICNAF Subdiv. 3Ps, NW Atl.)
- 78/19 (yield predictions, haddock, ICNAF Div. 4X, NW Atl.)
- 78/20 (yield, redfishes, ICNAF Div. 3Ø, NW Atl.)
- 78/22 (yield predictions, redfishes, ICNAF Subarea 2, Div. 3K, NW Atl.)
- 78/23 (yield predictions, redfishes, ICNAF Div. 4VWX, NW Atl.)
- 78/24 (yield predictions, redfishes, ICNAF Div. 4VWX, Subarea 5, NW Atl.)
- 78/25 (yield predictions, Atlantic herring, ICNAF Div. 4WX, NW Atl.)
- 78/26 (fishery surveys, yield predictions, northern pink shrimp, Esquiman Channel, Gulf of St. Lawrence)
- 78/27 (yield predictions, snow crab, Gulf of St. Lawrence)
- 78/31 (yield, size-limit regulations, American lobster, Nfld.)
- 78/34 (yield predictions, Atlantic herring, SE Nfld.)
- 78/38 (catch statistics, population structure, red crab, Scotian Shelf)
- 78/41 (yield predictions, snow crab, NW Cape Breton I., N.S.)
- 78/42 (population characteristics, fishery management, sea scallop, Northumberland Strait, Gulf of St. Lawrence)
- 78/44 (catch statistics, population structure, Atlantic herring, St. Lawrence R. estuary)
- 79/1 (fishery management, northern pink shrimp, Labrador)
- 79/5 (yield predictions, Atlantic herring, W Nfld.)
- 79/8 (population structure, witch flounder, ICNAF Div. 4RS, NW Atl.)
- 79/10 (yield predictions, American plaice, ICNAF Subdiv. 3Ps, NW Atl.)
- 79/11 (yield predictions, American

- plaice, ICNAF Subarea 2, Div. 3K, NW Atl.)
- 79/13 (population structure, catch statistics, witch flounder, ICNAF Subdiv. 3Ps, NW Atl.)
- 79/16 (yield predictions, Atlantic herring, E Nfld.)
- 79/18 (yield predictions, Atlantic cod, ICNAF Subdiv. 3Ps, NW Atl.)
- 79/19 (yield predictions, Atlantic herring, ICNAF Div. 4WX, NW Atl.)
- 79/21 (yield predictions, Atlantic cod, ICNAF Div. 4T, Subdiv. 4Vn, NW Atl.)
- 79/22 (yield predictions, Atlantic cod, ICNAF Subdiv. 3Ps, NW Atl.)
- 79/23 (yield predictions, Atlantic cod, ICNAF Div. 4RS, Subdiv. 3Pn, NW Atl.)
- 79/28 (yield predictions, population dynamics, Atlantic herring, S Gulf of St. Lawrence)
- 79/30 (yield predictions, Atlantic cod, ICNAF Div. 4W, Subdiv. 4Vs, NW Atl.)
- 79/31 (eggs, spawning, Atlantic mackerel, Gulf of St. Lawrence)
- 79/33 (yield predictions, production, redfishes, ICNAF Subarea 2, Div. 3K, NW Atl.)
- 79/34 (catch/effort, production, redfishes, ICNAF Div. 3Ø, NW Atl.)
- 79/35 (yield predictions, Atlantic herring, Fortune Bay, Nfld.)
- 79/36 (yield predictions, Atlantic herring, St. Mary's Bay, Placentia Bay, Nfld.)
- 79/38 (yield predictions, population number, grey seal, Gulf of St. Lawrence, Scotian Shelf)
- 79/40 (yield predictions, Atlantic herring, ICNAF Subdiv. 4Vn, NW Atl.)
- 79/41 (yield predictions, deepwater redfish, ICNAF Div. 4VWX, NW Atl.)
- 79/42 (yield predictions, redfishes, ICNAF Div. 3P, NW Atl.)
- 79/43 (yield predictions, population characteristics, sea scallop, Bay of Fundy, NW Atl.)
- 79/44 (ichthyoplankton surveys, statistical analysis, Atlantic herring, ICNAF Div. 4WX, NW Atl.)
- 79/49 (inshore fisheries, population characteristics, Atlantic cod, ICNAF Subdiv. 4Vn, NW Atl.)
- 79/51 (yield predictions, population characteristics, American plaice, ICNAF Div. 4T, NW Atl.)
- 80/67 (northern pink shrimp, SE Cape Breton I., N.S., Gulf of St. Lawrence)
- 80/73 (regional variations, sea scallop, Northumberland Strait, Gulf of St. Lawrence)
- 80/75 (Atlantic herring, St. Mary's Bay, Placentia Bay, Nfld.)
- 80/76 (population structure, fishery management, Atlantic herring, Fortune Bay, Nfld.)
- 80/77 (analytical techniques, sea scallop)
- 80/78 (regional variations, sea scallop, Northumberland Strait, Gulf of St. Lawrence)
- 80/79 (yield predictions, sea scallop, Bay of Fundy, NW Atl.)
- 80/80 (yield predictions, regional variations, sea scallop, Browns Bank, German Bank, NW Atl.)
- 81/7 (yield predictions, catch statistics, northern pink shrimp, Labrador)
- 81/9 (yield predictions, catch/effort, Atlantic herring, W Nfld.)
- 81/10 (yield predictions, Atlantic herring, NAFO Div. 4WX, NW Atl.)
- 81/14 (population characteristics, catch/effort, Arctic char, N Labrador)
- 81/15 (catch/effort, fishery management, swordfish, NW Atl.)
- 81/17 (yield predictions, redfishes, NAFO Div. 4VWX, NW Atl.)
- 81/18 (yield predictions, Atlantic mackerel, NAFO Subareas 3-6, NW Atl.)
- 81/19 (yield predictions, Atlantic cod, NAFO Div. 4W, Subdiv. 4Vs, NW Atl.)
- 81/24 (yield predictions, haddock, NAFO Div. 4X, NW Atl.)
- 81/26F (population characteristics, Greenland halibut, NAFO Div. 4RST, NW Atl.)
- 81/31 (yield predictions, pollock, NAFO Subarea 5, Div. 4VWX, NW Atl.)
- 81/34 (yield predictions, American plaice, NAFO Div. 4T, NW Atl.)
- 81/35 (catch/effort, population characteristics, bluefin tuna, NW Atl.)
- 81/37 (yield predictions, American plaice, NAFO Subdiv. 3Ps, NW Atl.)
- 81/38 (yield predictions, redfishes, NAFO Div. 3Ø, NW Atl.)
- 81/39 (yield predictions, Atlantic cod, NAFO Subdiv. 3Ps, NW Atl.)
- 81/40 (yield predictions, snow crab, Cape Breton I., N.S.)
- 81/41 (yield predictions, Atlantic cod, NAFO Div. 4T, Subdiv. 4Vn, NW Atl.)
- 81/42 (yield predictions, Atlantic herring, E Nfld.)
- 81/44 (population characteristics, Atlantic herring, NAFO Subdiv. 4Vn, NW Atl.)
- 81/45 (yield predictions, Atlantic cod, NAFO Div. 4X, NW Atl.)
- 81/46 (biomass, marine fishes, NAFO Div. 4TVWX, NW Atl.)
- 81/47 (yield predictions, Atlantic cod, NAFO Div. 4RS, Subdiv. 3Pn, NW Atl.)

- 81/50 (yield predictions, redfishes, NAFO Subarea 2, Div. 3K, NW Atl.)
- 81/51 (yield predictions, American plaice, NAFO Subarea 2, Div. 3K, NW Atl.)
- 81/52 (yield predictions, witch flounder, NAFO Div. 4RS, NW Atl.)
- 81/53 (yield predictions, witch flounder, NAFO Div. 2J, Div. 3KL, NW Atl.)
- 81/54 (yield predictions, witch flounder, St. Pierre Bank, NW Atl.)
- 81/57 (yield predictions, snow crab, Nfld.)
- 81/58 (yield predictions, redfishes, NAFO Div. 4RST, NW Atl.)
- 81/59 (yield predictions, redfishes, NAFO Div. 3P, NW Atl.)
- Stock identification
- J 38(7) : 744 (subpopulation, analytical techniques, scales, sockeye salmon)
- (7) : 782 (subpopulation, population genetics, witch flounder, Nfld.)
- (12) : 1457-1914 (conferences, population genetics, fishery management, Great Lakes)
- (12) : 1476 (population genetics, fishery management, Great Lakes)
- (12) : 1479 (genotypes, phenotypes)
- (12) : 1497 (gillraker counts, phenotypic variations, coregonids)
- (12) : 1591 (population genetics, marine fishes, USSR)
- (12) : 1626 (population genetics, speciation, salmonids)
- (12) : 1657 (fishery management, historical account, Pacific salmon, B.C.)
- (12) : 1708 (population genetics, sea lamprey, NE Canada, NE USA)
- (12) : 1724 (subpopulation, historical account, lake trout, L. Superior)
- (12) : 1808 (population genetics, morphology, lake herring, bloater, kiyi, shortjaw cisco, L. Superior)
- (12) : 1832 (population genetics, subpopulation, sea lamprey, L. Superior)
- (12) : 1838 (population genetics, methodology, literature reviews, fishes)
- T 1021 (morphology, meristic counts, Pacific herring, B.C.)
- M 1560 (population structure, goldeye, Peace-Athabasca Delta, Alta.)
- I 125 (tagging, Pacific herring, B.C.)
- CRD 78/45 (meristic counts, statistical analysis, Atlantic herring, NW Atl.)
- 79/3 (subpopulation, Atlantic salmon, W Greenland, Labrador Sea)
- 79/6 (mathematical models, weight, Atlantic salmon, W Greenland)
- 79/26 (statistical analysis, Atlantic salmon, W Greenland)
- 80/66 (marking, aquaculture techniques, American lobster)
- 91/33 (scales, mathematical analysis, Atlantic salmon, North R., Cape Breton I., N.S.)
- Stocking(organisms) (see also Fish culture; also Shellfish culture)
- J 38(12) : 1466 (fishery management, Great Lakes)
- (12) : 1672 (survival, growth, brook trout, lakes, Algonquin Park, Ont.)
- (12) : 1685 (fishery management, population genetics, lake trout, L. Simcoe, L. Opeongo, Ont.)
- (12) : 1701 (population characteristics, growth, survival, brook trout, Adirondack Mts., NY)
- (12) : 1877 (population genetics, fishery management, Great Lakes)
- T 989 (pond culture, growth, survival, *Gammarus lacustris*)
- M 1578 (growth, rainbow trout, Polar L., N.W.T.)
- D 252 (fish culture, coho salmon, Campbell R., Vancouver I., B.C.)
- 271 (biological data, Atlantic salmon, brook trout, rainbow trout, lake trout, Maritime Provinces)
- Stocking density
- T 1010 (fishery economics, Atlantic oyster, Dunk R., P.E.I.)
- M 1587 (resource management, shellfish culture, Dunk R., P.E.I.)
- Storage; Storage effects
- T 996 (freezing storage, quality control, spiny dogfish, NE Pac.)
- S 2750 (cold storage, fishery products, Atlantic cod, Atlantic herring, Atlantic mackerel)
- Strait of... (see name of strait)
- Stream flow
- J 38(11) : 1363 (mathematical models, habitat, invertebrates)
- Strombidium* (see Protozoa)
- Stylodrilus* (see Oligochaeta)
- Strongylocentrotus droebachiensis* (see Urchin, green sea)
- franciscanus* (see Urchin, red sea)
- Subpopulation
- J 38(6) : 669 (population genetics, biochemical analysis, regional variations, Greenland halibut, NW Atl., Gulf of St. Lawrence, Bering Sea)
- (8) : 939 (hybrids, cutthroat trout, rainbow trout, CA)
- (12) : 1457-1914 (conferences, population genetics, fishery

- management, Great Lakes)
 (12) : 1724 (stock identification, historical account, lake trout, L. Superior)
 (12) : 1738 (population genetics, polymorphism, genome, lake trout, L. Superior)
 (12) : 1747 (population genetics, historical account, lake trout, L. Michigan)
 (12) : 1759 (life history, migrations, spawning behavior, rainbow trout, Great Lakes)
 (12) : 1772 (population genetics, phenotypes, population structure, lake whitefish, L. Huron)
 (12) : 1790 (allopatric populations, life history, morphology, lake whitefish, Great Lakes)
 (12) : 1814 (population characteristics, fishery management, population genetics, walleye, North America)
 (12) : 1832 (stock identification, population genetics, sea lamprey, L. Superior)
 (12) : 1889 (population genetics, fishery management)
 S 2777 (population structure, Atlantic salmon, Irminger Sea, E Greenland)
 CRD 79/3 (stock identification, Atlantic salmon, W Greenland, Labrador Sea)
- Substrata
 M 1593 (dragrakes, environmental effects, Irish moss, SW N.S.)
 D 267 (hatching, eggs, substrata, Pacific herring)
 CRD 80/69 (environmental effects, harvesting, Irish moss, N.S.)
- Sucker, longnose (*Catostomus catostomus*)
 D 61 (tagging, environmental effects, dams, Peace-Athabasca Delta, Alta.)
- Sucker, white (*Catostomus commersoni*)
 D 61 (tagging, environmental effects, dams, Peace-Athabasca Delta, Alta.)
- Superior, Lake, America
 J 38(2) : 224 (phosphorus cycle, kinetics, phytoplankton)
 (8) : 952 (chemical pollutants, silicates, bioaccumulation, lake trout)
 (12) : 1724 (stock identification, historical account, subpopulation, lake trout)
 (12) : 1738 (population genetics, polymorphism, subpopulation, lake trout)
 (12) : 1808 (population genetics, stock identification, morphology, lake herring, bloater, kiyl, shortjaw cisco)
 (12) : 1832 (stock identification, population genetics, subpopulation, sea lamprey)
- Survival
 J 38(2) : 215 (environmental effects, emergence, larvae, capelin, Nfld.)
 (12) : 1672 (stocking, growth, brook trout, lakes, Algonquin Park, Ont.)
 (12) : 1701 (population characteristics, stocking, brook trout, Adirondack Mts., NY)
 T 989 (pond culture, growth, *Gammarus lacustris*)
 S 2840 (sea ice, polynyas, marine mammals, Arctic)
- Suspended matter
 T 991 (organic, bubbling, oceanographic equipment)
 1001 (nutrients, seasonal variations, St. Georges Bay, N.S.)
 S 2772 (energy flow, ecosystems, mathematical models)
 2778 (flocculation, snow)
 2780 (sedimentation, marine environment)
- Swordfish (*Xiphias gladius*)
 CRD 80/81 (historical account, life history, catch statistics, E coast, Canada)
 81/15 (stock assessment, catch/effort, fishery management, NW Atl.)
- Sympatric populations
 J 38(2) : 240 (sexual dimorphism, least cisco, Trout L., Y.T.)
- Synchaeta* (see Rotifera)
- T
- Tagging
 J 38(4) : 394 (growth, mathematical models, Pacific halibut, B.C.)
 (9) : 1077 (tag loss, mathematical models, stock assessment)
 (9) : 1168 (marking, fins, freshwater fishes)
 M 1560 (migrations, goldeye, Peace-Athabasca Delta, Alta.)
 1588 (migrations, population structure, sablefish, B.C. coast)
 1608 (homing behavior, chinook salmon, coho salmon, Cowichan-Koksilah R., Vancouver I., B.C.)
 D 58 (biological sampling, catch statistics, coho salmon, chinook salmon, B.C.)
 61 (migrations, freshwater fishes, Peace-Athabasca Delta, Alta.)
 196 (biological sampling, catch statistics, chinook salmon, coho salmon, steelhead trout, B.C.)
 197 (biological sampling, catch statistics, chinook salmon, coho salmon, steelhead trout, B.C.)
 223 (recovery, Pacific salmon, high seas, N Pac.)

- 262 (spiny dogfish, Strait of Georgia, NE Pac.)
- I 125 (stock identification, migrations, Pacific herring, B.C.)
- CRD 77/22 (production, stock assessment, harp seal, NW Atl.)
- 78/36 (population dynamics, hooded seal, Gulf of St. Lawrence)
- 79/20 (migrations, Atlantic cod, North Shore, Que.)
- 80/66 (stock identification, American lobster)
- Taxonomy**
- J 38(5) : 544 (scales, alewife, blueback herring, West R., N.S.)
- (7) : 821 (identification keys, new records, geographical distribution, eelpouts, Arctic)
- (8) : 873 (morphology, deepwater redfish, Labrador redfish, Grand Bank, NW Atl.)
- B 209 (identification keys, Polychaeta, B.C., WA)
- S 2809 (Hirudinea, Bay of Fundy, NW Atl.)
- 2835 (new species, *Doncricotopus bicaudatus*, N.W.T.)
- 2836 (*Tvetenia*, *Dratnalia*, *Eukiefferiella*, *Cardiocladius*)
- Temperature; Temperature effects**
- J 38(1) : 16 (morphology, gills, rainbow trout)
- (1) : 77 (growth, production, *Eurytemora herdmanni*, N.S., NW Atl.)
- (7) : 758 (enzymatic activity, migrations, steelhead trout)
- (7) : 795 (bioenergetics, spawning migrations, American shad, Connecticut R., CT)
- (10) : 1182 (blood, goldfish)
- (10) : 1189 (development, smolts, Atlantic salmon)
- (11) : 1357 (development, *Daphnia rosea*, B.C.)
- CRD 78/43 (growth, Atlantic herring, Fortune Bay, Nfld.)
- Tennessee State, USA**
- J 38(7) : 860 (nutrient cycles, measuring, phosphorus, rivers)
- Terminology**
- J 38(12) : 1479 (stock concept, population genetics)
- Territoriality**
- T 1029 (agonistic behavior, juveniles, coho salmon, Atlantic salmon, brook trout, steelhead trout)
- S 2765 (behavior, secretion, coyote, Jasper National Park, Alta.)
- 2786 (agonistic behavior, juveniles, brook trout)
- Theragra chalcogramma* (see Pollock, walleye)
- Thermal pollution (see Pollutants; Pollution; Pollution effects)
- Thunnus alalunga* (see Albacore)
- albacares (see Tuna, yellowfin)
- obesus (see Tuna, bigeye)
- thynnus (see Tuna, bluefin)
- Thymallus arcticus* (see Grayling, Arctic)
- Tides**
- S 2804 (currents, mathematical models)
- Time series analysis**
- S 2771 (marine ecosystems)
- Tissues**
- S 2843 (mercury, selenium, ringed seal, bearded seal, Arctic)
- Tomcod, Atlantic (*Microgadus tomcod*)**
- J 38(1) : 91 (mathematical models, population density)
- Toxicants; Toxicity; Toxicity tests**
- J 38(4) : 387 (nitrites, pH effects, rainbow trout)
- (5) : 485 (pesticides, sublethal effects, *Eurytemora affinis*, *Daphnia pulex*)
- (7) : 739 (chemical composition, pulp wastes, rainbow trout)
- (7) : 752 (ozone, chlorine, waste water treatment, striped bass)
- (8) : 880 (copper, acclimation, rainbow trout)
- (8) : 983 (ammonia, dissolved oxygen, rainbow trout)
- (10) : 1209 (cadmium, mercury, plankton, Experimental Lakes Area, NW Ont.)
- (11) : 1322 (diseases, pathogens, *Aeromonas salmonicida*, salmonids)
- T 975 (conferences, aquatic environment, Canada)
- 990 (conferences, aquatic environment)
- 999 (acids, heavy metals, freshwater fishes, Ont.)
- S 2743 (bioassays, invertebrates)
- 2744 (chlorine compounds, sediments, sea water, sand shrimp)
- 2745 (pesticides, Atlantic salmon, American lobster, sand shrimp)
- 2762 (mercury compounds, freshwater fishes, marine fishes)
- 2816 (pesticides, methoxychlor, aquatic organisms)
- 2827 (atmospheric precipitations, eggs, Atlantic salmon)
- 2845 (pesticides, sediments, sand shrimp)
- 2848 (phenols, bioaccumulation, lethal effects, sand shrimp, Atlantic salmon)
- Toxicology**
- J 38(9) : 1106 (steroids, environmental effects, pollutants, channel catfish)

Toxins (see Poisons(biological))

Trace elements

- S 2850 (pollution effects, growth, phytoplankton)

Tracers

- J 38(2) : 133 (samarium isotopes, marking, medaka, goldfish)
(10) : 1281 (samarium isotopes, diets, medaka, goldfish)

Transplantation (see also Stocking(organisms))

- T 1015 (resource development, shellfish culture, Atlantic oyster, Dunk R., P.E.I.)
D 274 (aquatic plants, habitat improvement, Fraser R. estuary, B.C.)

Transportation

- S 2797 (snowmobiles, N.W.T.)
2798 (snowmobiles, N.W.T.)

Trawling; Trawls

- SP 58 (bottom trawls, biological surveys, conferences, NW Atl.)
T 1030 (computer programs, fishery surveys, Nfld.)

Trophic structure

- J 38(8) : 960 (nannoplankton, biomass, eutrophic lakes, L. Memphremagog, Que.)

Trout, brook (*Salvelinus fontinalis*)

- J 38(5) : 547 (bacterial diseases, kidney, WY)
(7) : 765 (feeding behavior, food, larvae, Matamek R., Que.)
(10) : 1220 (interspecific relationships, competitors, habitat, brown trout, MI)
(12) : 1672 (stocking, survival, growth, lakes, Algonquin Park, Ont.)
T 982 (population characteristics, Nashwaak R. watershed, N.B.)
1029 (interspecific relationships, agonistic behavior, territoriality, juveniles)
D 271 (fish culture, stocking, biological data, Maritime Provinces)
S 2786 (territoriality, agonistic behavior)
2841 (bioaccumulation, excretion, chemical compounds)

Trout, brown (*Salmo trutta*)

- J 38(3) : 334 (vertebrae counts, environmental effects, mathematical models)
(5) : 547 (bacterial diseases, kidney, WY)
(5) : 552 (hybrids, Atlantic salmon, Stewiacke R., N.S.)
(10) : 1220 (interspecific relationships,

competitors, habitat, brook trout, MI)

Trout, cutthroat (*Salmo clarki*)

- J 38(10) : 1228 (interspecific relationships, competitors, ecological distribution, rainbow trout, B.C.)

Trout, cutthroat (*Salmo clarki henshawi*)

- J 38(8) : 939 (subpopulation, Lahontan cutthroat trout, CA)

Trout, cutthroat (*Salmo clarki seleniris*)

- J 38(8) : 939 (subpopulation, Paiute cutthroat trout, CA)

Trout, lake (*Salvelinus namaycush*)

- J 38(2) : 250 (PCBs, growth, mathematical models)
(8) : 952 (chemical pollutants, silicates, bioaccumulation, L. Superior)
(12) : 1481 (homing behavior, orientation, population genetics, Great Lakes)
(12) : 1685 (fishery management, population genetics, stocking, L. Simcoe, L. Opeongo, Ont.)
(12) : 1701 (population characteristics, stocking, survival, Adirondack Mts., NY)
(12) : 1724 (stock identification, subpopulation, historical account, L. Superior)
(12) : 1738 (population genetics, polymorphism, subpopulation, L. Superior)
(12) : 1747 (population genetics, subpopulation, historical account, L. Michigan)
M 1584 (sport fishing statistics, fishery surveys, Yellowknife R., Hay R., N.W.T.)
D 271 (fish culture, stocking, biological data, Maritime Provinces)

Trout, rainbow (*Salmo gairdneri*)

- J 38(1) : 16 (morphology, gills, temperature effects)
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the relevance of the stock concept to
fishery management. 1908-1914

STOCS participants. 1915-1921

SPECIAL PUBLICATIONS/PUBLICATIONS SPECIALES

Abbreviation/Abréviation: SP

- 43F. Resh, V. H. et D. M. Rosenberg (éds.) 1981. Enseignement novateur de l'entomologie aquatique. 122 p. (Canada \$4.00, autres pays \$4.80: S'adresser à: Approvisionnement et Services Canada, Centre d'édition du gouvernement du Canada, Hull (Québec), Canada KIA 0S9.)
- 44F. Scherer, E. (éd.) 1981. Essais de toxicité pour organismes d'eau douce. 197 p. (Gratuit: S'adresser au ministère des Pêches et Océans, 501, University Crescent, Winnipeg (Manitoba), Canada R3T 2N6.)
47. Marine Research Associates Ltd. 1980. Canadian Atlantic offshore fishery atlas. 88 p. (Free: Available from Department of Fisheries and Oceans, Biological Station, St. Andrews, New Brunswick, Canada B0G 2X0.)
- 52F. Mitchell, C. L. 1981. L'industrie canadienne de la pêche: une analyse sectorielle. 58 p. (Canada \$2.95, autre pays \$3.55: S'adresser à: Approvisionnement et Services Canada, Centre d'édition du gouvernement du Canada, Hull (Québec), Canada KIA 0S9.)
53. Department of Fisheries and Oceans. 1980. Ocean information services. 67 p. (Free: Available from Department of Fisheries and Oceans, Ocean and Aquatic Affairs Branch, 240 Sparks Street, 7th Floor West, Ottawa, Ontario, Canada KIA 0E6.)
- 53F. Ministère des Pêches et Océans. 1980. Services d'information sur les océans. 1980. 74 p. (Gratuit: S'adresser au ministère des Pêches et Océans, Direction des Affaires Océaniques et Aquatiques, 240, rue Sparks, 7e étage ouest, Ottawa (Ontario), Canada KIA 0E6.)
54. Lawrence, S. G. 1980. Manual for culture of freshwater invertebrates. 167 p. (Free: Available from Department of Fisheries and Oceans, Freshwater Institute, 501 University Crescent, Winnipeg, Manitoba, Canada R3T 2N6.)
55. Hilton, J. W., and S. J. Slinger. 1981. Nutrition and feeding of rainbow trout. 15 p. (Canada \$3.00, other countries \$3.60: Available from Supply and Services Canada, Canadian Government Publishing Centre, Hull, Quebec, Canada KIA 0S9.)
- 55F. Hilton, J. W. et S. J. Slinger. 1981. Nutrition et alimentation de la truite arc-en-ciel. 17 p. (Canada \$3.00, autre pays \$3.60: S'adresser à: Approvisionnement et Services Canada, Centre d'édition du gouvernement du Canada, Hull (Québec), Canada KIA 0S9.)
56. Thomson, R. E. 1981. Oceanography of the British Columbia coast. 291 p. (Canada \$19.95, other countries \$23.95: Available from Supply and Services Canada, Canadian Government Publishing Centre, Hull, Quebec, Canada KIA 0S9.)
57. Anonymous. 1981. Directory of marine scientists in Canada - 1981/Répertoire des experts des sciences de la mer au Canada - 1981. 331 p. (Free/Gratuit: Available from Secretariat, Canadian Committee on Oceanography, Department of Fisheries and Oceans, 240 Sparks Street, Ottawa, Ontario, Canada KIA 0E6/ S'adresser le Secretariat, Comité canadien d'Océanographie, ministère des Pêches et des Océans, 240, rue Sparks, Ottawa (Ontario), Canada KIA 0E6
58. Doubleday, W. G., and D. Rivard (éds.) 1981. Bottom trawl surveys/Relèves au chalut de fond. 273 p. (Canada \$14.95, other countries/autres pays \$17.95: Available from Supply and Services Canada, Canadian Government Publishing Centre, Hull, Quebec, Canada KIA 0S9/ S'adresser à: Approvisionnement et Services Canada, Centre d'édition du gouvernement du Canada, Hull (Québec), Canada KIA 0S9.)

BULLETINS

Abbreviation/Abréviation: B

209. Hobson, K. D., and K. Banse. 1981. Sedentariate and archiannelid polychaetes of British Columbia and Washington. 144 p. (Canada \$10.50, other countries \$12.60.)
210. Platt, T. (ed.) 1981. Physiological bases of phytoplankton ecology. 346 p. (Canada \$17.95, other countries (\$21.55.))

(Bulletins are available by mail from the Canadian Government Publishing Centre, Supply and Services Canada, Hull, Que. K1A 0S9.)

(Les Bulletins sont en vente par la poste au Centre d'édition du gouvernement du Canada, Approvisionnement et Services Canada, Hull, Qué. K1A 0S9.)

ANNUAL REPORT/RAPPORT ANNUEL

Abbreviation/Abréviation: AR

- Annual Report 1979-80. 1981. Department of Fisheries and Oceans. 26 p./Rapport annuel 1979-80. Ministère des Pêches et des Océans. 31 p. (10)

TECHNICAL REPORTS/RAPPORTS TECHNIQUES

Abbreviation/Abréviation: T

(NOTE: These reports contain scientific and technical information that represents an important contribution to existing knowledge but which for some reason may not be appropriate for primary scientific (i.e. *Journal*) publication. Technical Reports are directed primarily towards a worldwide audience and have an international distribution. No restriction is placed on subject matter and the series reflects the broad interests and policies of the Department of Fisheries and Oceans, namely, fisheries management, technology and development, ocean sciences, and aquatic environments relevant to Canada.)

Technical Reports may be cited as full publications. The correct citation appears above the abstract of each report. Each report will be abstracted in *Aquatic Sciences and Fisheries Abstracts* and will be indexed annually in the Department's index to scientific and technical publications.

Numbers 1-456 in this series were issued as Technical Reports of the Fisheries Research Board of Canada. Numbers 457-714 were issued as Department of the Environment, Fisheries and Marine Service, Research and Development Directorate Technical Reports. Numbers 715-924 were issued as Department of Fisheries and the Environment, Fisheries and Marine Service Technical Reports. The current series name was changed with report number 925 and is now Canadian Technical Report of Fisheries and Aquatic Sciences.

Numbers 875, 914, 918, 927, 928, 936, 955, and 963 were issued too late for listing and indexing in previous indexes. They are indexed herein. The numerals in parentheses at the end of each reference indicate the name of the establishment from which the information or the report originated. See pages 1928 and 1929 for addresses corresponding to these numerals. Copies of Technical Reports may be obtained from Micromedia Ltd., 144 Front Street West, Toronto, Ontario M5J 1G2.)

(REMARQUE: Ces rapports contiennent des renseignements scientifiques et techniques qui constituent une contribution importante aux connaissances actuelles mais qui, pour une raison ou pour une autre,

ne semblent pas appropriés pour la publication dans un journal scientifique. Il n'y a aucune restriction quant au sujet, de fait, la série reflète la vaste gamme des intérêts et des politiques du Ministère des Pêches et des Océans, notamment gestion des pêches, techniques et développement, sciences océaniques et environnements aquatiques, au Canada.

Les Rapports techniques peuvent être considérés comme des publications complètes. Le titre exact paraîtra au haut du résumé de chaque rapport, qui sera publié dans la revue *Aquatic Sciences and Fisheries Abstracts* et qui figurera dans l'index annuel des publications scientifiques et techniques du Ministère.

Les numéros 1-456 de cette série ont été publiés à titre de Rapports techniques de l'Office des recherches sur les pêcheries du Canada. Les numéros 457-714, à titre de Rapports techniques de la Direction générale de la recherche et du développement, Service des pêches et de la mer, ministère de l'Environnement. Les numéros 715-924 ont été publiés à titre de Rapports techniques du Service des pêches et de la mer, Ministère des Pêches et de l'Environnement. Le nom de la série a été modifié à partir du numéro 925 et est maintenant Rapport technique canadien des sciences halieutiques et aquatiques.

Les numéros 875, 914, 918, 927, 928, 936, 955 et 963, sont sortis trop tard pour les inclure dans les index antérieurs. Le numéro entre parenthèses, à la fin de chaque référence, indique l'établissement d'où provient la documentation du rapport. Voir aux pages 1928 et 1929 les adresses correspondant à ces numéros. On peut se procurer des exemplaires de Rapports techniques auprès de Micromedia Ltd., 144 Front Street West, Toronto, Ontario M5J 1G2.)

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| <p>875. Sameoto, D. D., and M. K. Lewis. 1980. Zooplankton and micronekton associated with acoustic scattering layers on the Nova Scotia shelf and slope during May, 1977. 44 p. (7)</p> | <p>966. Lindsey, C. C., K. Patalas, R. A. Bodaly, and C. P. Archibald. 1981. Glaciation and the physical, chemical and biological limnology of Yukon lakes. 37 p. (4)</p> |
| <p>914. Uthe, J. F. 1979. The environmental occurrence and health aspects of polycyclic aromatic hydrocarbons. 30 p. (8)</p> | <p>970. Swann, C. G., and E. M. Donaldson. 1980. Bibliography of salmonid reproduction 1963-1979 for the family Salmonidae; subfamilies Salmoninae, Coregoninae and Thymallinae. 221 p. (3)</p> |
| <p>918. Munawar, M., and I. F. Munawar. 1979. The phytoplankton of Georgian Bay and North Channel, 1974: a preliminary study. 6 p. (11)</p> | <p>971. Ricker, W. E., and W. P. Wickett. 1980. Causes of the decrease in size of coho salmon (<i>Oncorhynchus kisutch</i>). 63 p. (1)</p> |
| <p>927. Lancot, M. 1980. The development and early growth of embryos and larvae of the Atlantic mackerel, <i>Scomber scombrus</i> L., at different temperatures. 77 p. (7)</p> | <p>972. Farmer, G. J., T. R. Goff, D. Ashfield, and H. S. Samant. 1980. Some effects of the acidification of Atlantic salmon rivers in Nova Scotia. 13 p. (8)</p> |
| <p>928. Gordon, D. C. Jr., P. D. Keizer, J. Dale, and P. J. Cranford. 1980. Pecks Cove mudflat ecosystem study: observations in 1978. 23 p. (7)</p> | <p>973. Pringle, J. D., and D. J. Jones. 1980. The interaction of the lobster, scallop, and Irish moss fisheries off Borden, Prince Edward Island. 17 p. (7)</p> |
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| <p>955. Kenchington, T. J. 1980. The fishes of St. Georges Bay, Nova Scotia. 154 p. (7)</p> | <p>975. Klaverkamp, J. F., S. L. Leonhard, and K. E. Marshall (eds.) 1980. Proceedings of the sixth annual aquatic toxicity workshop, November 6 & 7, 1979, Winnipeg, Manitoba. 291 p. (4)</p> |
| <p>963. Uthe, J. F., and V. Zitko (eds.) 1980. Cadmium pollution of Belledune Harbour, New Brunswick, Canada. 107 p. (6)</p> | |
| <p>965. Hicklin, P. W., L. E. Linkletter, and D. L. Peer. 1980. Distribution and abundance of <i>Corophium volutator</i> (Pallas), <i>Nacoma baththica</i> (L.) and</p> | |

977. Stone, H., and R. F. J. Bailey. 1980. A survey of the red crab resource on the continental slope, N.E. Georges Bank and western Scotian Shelf. 9 p. (6)
978. Wickett, W. P., and A. Ballantyne. 1980. Yield charts for north coast B.C. salmon populations based on freshwater and ocean survival indices. 83 p. (1)
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981. Peer, D., D. J. Wildish, A. J. Wilson, J. Hines, and M. J. Dadswell. 1980. Sublittoral macro-infauna of the lower Bay of Fundy. 74 p. (7)
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983. Vass, W. P., G. C. H. Harding, and S. Pearre Jr. 1981. A bidirectional trap for quantifying the vertical migration of planktonic organisms. 27 p. (7)
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988. Lett, P. F. K. 1980. A comparative study of the recruitment mechanisms of cod and mackerel, their interaction, and its implication for dual stock management. 45 p. (6)
989. Mathias, J. A., and M. Papst. 1981. Growth, survival and distribution of *Gammarus lacustris* (Crustacea - Amphipoda) stocked into ponds. 11 p. (4)
990. Bermingham, N., C. Blaise, P. Couture, B. Hummel, G. Joubert et/and M. Speyer. 1981. Compte-rendu des communications du septième atelier annuel sur la toxicité aquatique: le 5 à 7 novembre, 1980, Montréal (Québec)/Proceedings of the Seventh Annual Aquatic Toxicity Workshop: November 5-7, 1980, Montreal, Quebec. 519 p. (10)
991. Johnson, B., W. H. Sutcliffe Jr., and R. C. Cooke. 1981. Particle production in natural seawater by bubble dissolution. 52 p. (7)
992. Marshall, K. E., and M. Layton. 1981. An index to the publications of the staff of the Western Region, Department of Fisheries and Oceans, 1978-79. 56 p. (4)
993. Elner, J. K., and D. J. Wildish. 1981. Seasonal data on the microbial community of four New Brunswick ponds, including a period of experimental spraying with Matacil. 21 p. (6)
994. MacIsaac, E. A., K. S. Shortreed, and J. G. Stockner. 1981. Seasonal distributions of bacterioplankton numbers and activities in eight fertilized or untreated oligotrophic British Columbia lakes. 43 p. (3)
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999. Spry, D. J., C. M. Wood, and P. V. Hodson. 1981. The effects of environmental acid on freshwater fish with particular reference to the soft water

- lakes in Ontario and the modifying effects of heavy metals. A review. 145 p. (11)
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1001. Hargrave, B. T., and N. J. Prouse. 1981. Observations of dissolved nutrients, phytoplankton biomass, sedimentation and sediment organic matter in St. Georges Bay, 1978. 91 p. (7)
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1003. Miller, R. J., and P. G. O'Keefe. 1981. Seasonal and depth distribution, size, and molt cycle of the spider crabs, *Chionoecetes opilio*, *Hyas araneus*, and *Hyas coarctatus* in a Newfoundland bay. 18 p. (9)
1004. Marshall, K. E. 1981. A bibliography of the arctic charr, *Salvelinus alpinus* (L.) complex to 1980. 68 p. (4)
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1008. Messieh, S. N., D. J. Wildish, and R. H. Peterson. 1981. Possible impact from dredging and spoil disposal on the Miramichi Bay herring fishery. 33 p. (6)
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1010. Lavoie, R. E., and C. F. Bryan. 1981. Medium-term value of stock thinning for oyster resource enhancement - Dunk River, P.E.I. (Part 2 of 2). 11 p. (8)
1011. Sutterlin, A. M., E. B. Henderson, S. P. Merrill, R. L. Saunders, and A. A. MacKay. 1981. Salmonid rearing trials at Deer Island, New Brunswick, with some projections on economic viability. 28 p. (6)
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1014. Jamieson, G. S., G. Kerr, and M. J. Lundy. 1981. Assessment of scallop stocks on Browns and German Banks - 1979. 17 p. (8)
1015. Lavoie, R. E., and C. F. Bryan. 1981. Oyster bed development in the Dunk River, P.E.I., 1975-1980. 14 p. (8)
1016. Schweigert, J. F., A. S. Hourston, and L. A. Webb. 1981. Effects of mesh size on roe yield from herring gillnet catches. 23 p. (1)
1017. Jamieson, G. S., N. B. Witherspoon, and M. J. Lundy. 1981. Assessment of Northumberland Strait scallop stocks - 1980. 44 p. (8)
1018. Cone, D. K. 1981. Skin lesions of Atlantic salmon (*Salmo salar*) in Newfoundland rivers. 9 p. (9)
1019. Scott, D. P. (ed./éd.). 1981. Biennial report - 1976-78, Western Region, Fisheries and Marine Service, Department of Fisheries and the Environment/Rapport biennal - 1976-78, Région de l'ouest, Service des pêches et de l'environnement. 36 p./35 p. (4)
1020. Peterson, R. H., and J. L. Metcalfe. 1981. Emergence of Atlantic salmon fry from gravels of varying composition: a laboratory study. 15 p. (6)
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- salmon (*Oncorhynchus nerka*) nursery lakes in British Columbia. 87 p. (1)
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1030. Smith, S. J., and G. D. Somerton. 1981. STRAP: a user-oriented computer analysis system for groundfish research trawl survey data. 66 p. (9)
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1033. Hillaby, B. A. 1981. The effects of coal dust on ventilation and oxygen consumption in the Dungeness crab, *Cancer magister*. 18 p. (12)

MANUSCRIPT REPORTS/RAPPORTS MANUSCRITS

Abbreviation/Abréviation: M

(NOTE: These reports contain scientific and technical information that represents an important contribution to existing knowledge but which for some reason may not be appropriate for primary scientific (i.e. *Journal*) publication. They differ from Technical Reports in terms of subject scope and potential audience: Manuscript Reports deal primarily with national or regional problems and distribution is generally restricted to institutions or individuals located in particular regions of Canada. No restriction is placed on subject matter and the series reflects the broad interests and policies of the Department of Fisheries and Oceans, namely, fisheries management, technology and development, ocean sciences, and aquatic environments relevant to Canada.

Manuscript Reports may be cited as full publications. The correct citation appears above the abstract of each report. Each report will be abstracted by *Aquatic Sciences and Fisheries Abstracts* and will be indexed annually in the Department's index to scientific and technical publications.

Numbers 1-900 in this series were issued as Manuscript Reports (Biological Series) of the Biological Board of Canada, and subsequent to 1937 when the name of the Board was changed by Act of Parliament, as Manuscript Reports (Biological Series) of the Fisheries Research Board of Canada. Numbers 901-1425 were issued as Manuscript Reports of the Fisheries Research Board of Canada. Numbers 1426-1550 were issued as Department of Fisheries and the Environment, Fisheries and Marine Service Manuscript Reports. The current series name was changed with report number 1551 and is now Canadian Manuscript Report of Fisheries and Aquatic Sciences.

Numbers 1479, 1502, 1525, 1539, 1551F, 1560, 1567, 1578, and 1584 were issued too late for listing and indexing in previous indexes. They are indexed herein. The numerals in parentheses at the end of each reference indicate the name of the establishment from which the information or the report originated. See pages 1928 and 1929 for addresses corresponding to these numerals. Copies of Manuscript Reports may be obtained from Micromedia Ltd., 144 Front Street West, Toronto, Ontario M5J 1G2.)

(REMARQUE: Ces rapports contiennent des renseignements scientifiques et techniques qui constituent une contribution importante aux connaissances actuelles mais qui, pour une raison ou pour une autre, ne semblent pas appropriés pour la publication dans un journal scientifique. Ils se distinguent des Rapports techniques par la portée du sujet et le lecteur visé: en effet, ils s'attachent

principalement à des problèmes d'ordre national ou régional et la distribution en est généralement limitée aux organismes et aux personnes de régions particulières du Canada. Il n'y a aucune restriction quant au sujet; de fait, la série reflète la vaste gamme des intérêts et des politiques du Ministère des Pêches et des Océans, notamment gestion des pêches; techniques et développement, sciences océaniques et environnements aquatiques au Canada.

Les Manuscrits peuvent être considérés comme des publications complètes. Le titre exact paraît au haut du résumé de chaque rapport, qui sera publié dans la revue *Aquatic Sciences and Fisheries Abstracts* et qui figurera dans l'index annuel des publications scientifiques et techniques du Ministère.

Les numéros de 1 à 900 de cette série ont été publiés à titre de manuscrits (Série biologique) de l'office de biologie du Canada, et après le changement de la désignation de cet organisme par décret du Parlement, en 1937, ont été classés en tant que manuscrits (Série biologique) de l'Office des recherches sur les pêcheries du Canada. Les numéros allant de 901 à 1425 ont été publiés à titre de manuscrits de l'Office des recherches sur les pêcheries du Canada. Les numéros 1426 à 1550 ont été publiés à titre de Rapport manuscrits du Service des pêches et de la mer, Ministère des Pêches et de l'Environnement. Le nom de la série a été changé à partir du rapport numéro 1551 et est maintenant Rapport manuscrit canadien des sciences halieutiques et aquatiques.

Les numéros 1479, 1502, 1525, 1539, 1551F, 1560, 1567, 1578 et 1584 sont sortis trop tard pour les inclure dans les index antérieurs. Le numéro entre parenthèses, à la fin de chaque référence, indique l'établissement d'où provient la documentation du rapport. Voir aux pages 1928 et 1929 les adresses correspondant à ces numéros. On peut se procurer des examplaires de Rapports manuscrits auprès de Micromedia Ltd., 144 Front Street West, Toronto, Ontario M5J 1G2.)

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| <p>1479. Russell, L. R., C. C. Graham, A. G. Sewid, and D. M. Archibald. 1981. Distribution of juvenile chinook, coho and sockeye salmon in Shuswap Lake - 1978-1979; biophysical inventory of littoral areas of Shuswap Lake, 1978. 54 p. (12)</p> <p>1502. Hilland, R. T., M. K. Farwell, and C. N. MacKinnon. 1980. Biological reconnaissance of Kitimat chinook and results of pilot hatchery operations to May, 1980. 48 p. (12)</p> <p>1525. Caddy, J. F. 1979. Notes on a more generalized yield per recruit analysis for crustaceans using size-specific inputs. 10 p. (8)</p> <p>1539. Sprout, P. E., and F. J. Fraser. 1981. A preliminary report on the salmon resource and potential enhancement opportunities of the northern west coast of Vancouver Island (Areas 26 and 27). 74 p. (12)</p> <p>1551F. Cook, D. G., J. M. Reinhart et J. Watson. 1980. Guide pour la préparation des Rapports canadiens des sciences halieutiques et aquatiques. 16 p. (10)</p> <p>1560. Kristensen, J. 1981. Investigations of goldeye and other fish species in the Wood Buffalo National Park section of the Peace-Athabasca Delta, 1977. 64 p. (4)</p> <p>1567. Robert, G., and D. W. Smith. 1980. Surveys of soft-shell clam (<i>Mya arenaria</i>) populations in some closed areas of Charlotte County, New Brunswick. 59 p. (8)</p> | <p>1578. Falk, M. R., and G. Low. 1981. Growth of stocked rainbow trout, <i>Salmo gairdneri</i> Richardson, in Polar Lake, Northwest Territories, 1977-79. 20 p. (4)</p> <p>1584. Falk, M. R. 1981. A questionnaire survey of sport fishing in the Yellowknife and Hay River areas, Northwest Territories, 1979. 19 p. (4)</p> <p>1586. Boutillier, J. A., K. D. Cooke, and R. J. McNaughton. 1980. Prawn trap exploration, Queen Charlotte Islands, February-March 1980. 122 p. (1)</p> <p>1587. Lavoie, R. E., and C. F. Bryan. 1980. Impact of stock thinning and relocation on oyster quality and value - Dunk River, P.E.I. (Part 1 of 2). 15 p. (8)</p> <p>1588. Beamish, R. J., C. Houle, and R. Scarsbrook. 1980. A summary of sablefish tagging and biological studies conducted during 1979 by the Pacific Biological Station. 194 p. (1)</p> <p>1589. LeDrew, L. J. 1980. Research on the Arctic char fishery of northern Labrador. 10 p. (9)</p> <p>1590. Moores, R. B., E. G. Dawe, and E. M. P. Chadwick. 1980. The Atlantic salmon resource in Newfoundland and Labrador: an angler's view. 37 p. (9)</p> <p>1592. Haeghele, C. W., and M. J. Hamey. 1980. Shoreline vegetation on herring spawning grounds in Kildid Sound, British Columbia. 25 p. (1)</p> |
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1593. Sharp, G. J., and D. L. Roddick. 1980. The impact of *Chondrus* dragraking on substrate stability in southwestern Nova Scotia. 14 p. (8)
1594. Barber, F. G. 1980. Pink salmon disparity; toward definition. 20 p. (10)
1595. Lister, D. B., D. E. Marshall, and D. G. Hickey. 1980. Chum salmon survival and production at seven improved groundwater-fed spawning areas. 58 p. (12)
1596. Greer, G. L., C. D. Levings, R. Harbo, B. Hillaby, T. Brown, and J. Sibert. 1980. Distribution of fish species on Roberts and Sturgeon Banks recorded in seine and trawl surveys. 51 p. (3)
1597. Hourston, A. S. 1980. Stock assessments for British Columbia herring management units in 1980 and forecasts of the potential roe catch in 1981. 11 p. (1)
1598. Papst, M. H., G. B. Ayles, and J. G. I. Lark. 1981. Current bibliography of publications on waste heat utilization in aquaculture. 13 p. (4)
1599. Ketchen, K. S. 1981. Reconstruction of Pacific ocean perch (*Sebastes alutus*) stock history in Queen Charlotte Sound. Part II. Catch per unit of effort as a measure of abundance. 72 p. (1)
1600. Haegeler, C. W. 1981. Diving survey assessment of 1980 herring spawnings in British Columbia. 111 p. (1)
1601. Pringle, J. D., D. J. Jones, and P. Rowe. 1980. Fishing power and ecological impact on Gulf *Chondrus* (Irish moss) of modified *Chondrus* dragrakes. 20 p. (8)
1602. Sibert, J. R. 1981. Surface circulation in the Nanaimo River Estuary and adjacent waters, June 17-21, 1974. 63 p. (1)
1603. Hourston, A. S., J. M. Hamer, J. Linskey, J. Beukema, and J. F. Schweigert. 1981. Computer programs for annual assessments and forecasts of British Columbia herring stocks. 491 p. (1)
- 1604F. Maranda, Y., S. S. M. Labonté et H. Powles. 1981. Exploitation potentielle du capelan au Québec: débarquements (1950-1979) et caractéristiques biologiques (1979-1980). 43 p. (13)
1605. Taylor, F. H. C., and R. Kieser. 1981. Hydroacoustic and fishing surveys of Queen Charlotte Sound, January 26-February 10, and October 2-21, 1978. 87 p. (1)
1606. Robert, G. 1981. Stock assessment of soft-shell clams in open shellfish growing areas of Prince Edward Island. 132 p. (8)
1607. Robert, G. 1981. Dynamics of an exploited population of bar clam, *Spisula solidissima*. 12 p. (8)
1608. Lister, D. B., L. M. Thorson, and I. Wallace. 1981. Chinook and coho salmon escapements and coded-wire tag returns to the Cowichan-Koksilah River system, 1976 to 1979. 78 p. (12)
1609. Robert, G. 1981. Seasonal changes in meat yield of cultivated blue mussels (*Mytilus edulis* L.). 8 p. (8)
1610. Beamish, R. J. 1981. A preliminary report of Pacific hake studies conducted off the west coast of Vancouver Island. 43 p. (1)
1611. Bunch, J. N., R. C. Harland, and J. Laliberté. 1981. Abundance and activity of heterotrophic marine bacteria in selected bays at Cape Hatt, N.W.T. 1980. 68 p. (5)
1612. Bernard, F. R. 1981. The food of Hecate Strait crabs, June 1978. 9 p. (1)
1613. Corkum, L. D., and P. J. McCart. 1981. A review of the fisheries of the Mackenzie Delta and nearshore Beaufort Sea. 55 p. (4)
1615. Zitko, V. 1981. Monitoring program for major Atlantic coast fisheries. 15 p. (6)
1616. Archibald, D. M., and C. C. Graham. 1981. Populations of Pacific salmon in British Columbia, 1970-1979. 64 p. (12)
1617. Haegeler, C. W., and M. J. Hamey. 1981. Shoreline vegetation on herring spawning grounds for Comox, Denman Island and Hornby Island. 41 p. (1)
1618. Adkins, B. E., R. M. Harbo, and P. A. Breen. 1981. A survey of commercial

- sea urchin (*Strongylocentrotus franciscanus*) populations in the Gulf Islands, November 1980. 41 p. (1)
1619. Haegele, C. W., and M. J. Hamey. 1981. Shoreline vegetation on herring spawning grounds for Cumshewa Inlet, Queen Charlotte Islands. 25 p. (1)
1620. McCullough, G. 1981. Water budgets for Southern Indian Lake, before and after impoundment and Churchill River diversion, 1972-79. 22 p. (4)

DATA REPORTS/RAPPORTS STATISTIQUES

Abbreviation/Abréviation: D

(NOTE: These reports provide a medium for filing and archiving data compilations where little or no analysis is included. Such compilations commonly will have been prepared in support of other journal publications or reports. The subject matter of Data Reports reflects the broad interests and policies of the Department of Fisheries and Oceans, namely, fisheries management, technology and development, ocean sciences, and aquatic environments relevant to Canada.

Numbers 1-25 in this series were issued as Fisheries and Marine Service Data Records. Numbers 26-160 were issued as Department of Fisheries and the Environment, Fisheries and Marine Service Data Reports. The current series name was changed with report number 161 and is now Canadian Data Report of Fisheries and Aquatic Sciences.

Data Reports are not intended for general distribution and the contents must not be referred to in other publications without prior written clearance from the issuing establishment. The correct citation appears above the abstract of each report.

Numbers 58, 61, 159, 174, 196, 197, and 213 were issued too late for listing and indexing in previous indexes. They are indexed herein. The numerals in parentheses at the end of each reference indicate the name of the establishment from which the information or the report originated. See pages 1928 and 1929 for addresses corresponding to these numerals. Copies of Data Reports may be obtained from Micromedia Ltd., 144 Front Street West, Toronto, Ontario M5J 1G2.)

(REMARQUE: Ces rapports servent de base à la compilation des données de classement et d'archives pour lesquelles il y a peu ou point d'analyse. Cette compilation aura d'ordinaire été préparée pour appuyer d'autres publications ou rapports. Les sujets des Rapports statistiques reflètent la vaste gamme des intérêts et politiques du Ministère des Pêches et des Océans, notamment gestion des pêches, techniques et développement, sciences océaniques et environnements aquatiques, au Canada.

Les numéros 1 à 25 de cette série ont été publiés à titre de Records statistiques, Service des pêches et de la mer. Les numéros 26-160 ont été publiés à titre de Rapports statistiques du Service des pêches et de la mer, Ministère des Pêches et de l'Environnement. Le nom de la série a été modifié à partir du numéro 161 et est maintenant Rapport statistique canadien des sciences halieutiques et aquatiques.

Les Rapports statistiques ne sont pas préparés pour une vaste distribution et leur contenu ne doit pas être mentionné dans une publication sans autorisation écrite préalable de l'établissement auteur. Le titre exact paraît au haut du résumé de chaque rapport.

Les numéros 58, 61, 159, 174, 196, 197 et 213 sont sortis trop tard pour les inclure dans les index antérieurs. Le numéro entre parenthèses, à la fin de chaque référence, indique l'établissement d'où provient la documentation du rapport. Voir aux pages 1928 et 1929 les adresses correspondant à ces numéros. On peut se procurer des exemplaires de Rapports statistiques auprès de Micromedia Ltd., 144 Front Street West, Toronto, Ontario M5J 1G2.)

58. Cook, R. C., and S. R. Heizer. 1978. Basic data for the 1976 Canadian chinook and coho catch sampling and mark recovery program. Volume one: Catch, sample size, observed and estimated mark recoveries for 15 catch regions; Volume two: Observed and estimated mark recoveries for each tag code; Volume three-Parts 1 and 2: Basic data for each chinook mark recovered; Volume four-Parts 1 and 2: Basic data for each coho mark recovery. Vol. 1, 507 p.; Vol. 2, 629 p.; Vol. 3, 749 p.; Vol. 4, 995 p. (12)
61. Kristensen, J., and S. A. Summers. 1981. Fish populations in the Peace-Athabasca Delta and the effects of water control structures on fish movements: data. 216 p. (4)
159. Manzon, C. I., and D. E. Marshall. 1981. Catalogue of salmon streams and spawning

- escapements of Area 7 (Bella Bella). 246 p. (12)
174. Irwin, B., and T. Platt. 1979. Phytoplankton productivity and nutrient measurements at the edge of the continental shelf off Nova Scotia between June 3 and June 6, 1978. 50 p. (7)
196. Simpson, K., J. A. Kokubo, and T. A. Mosley. 1981. Basic data for the 1978 Canadian salmonid catch sampling and mark recovery program. Catch, sample size, observed and estimated mark recoveries for 16 catch regions. [In 4 parts]. 3135 p. (11)
197. Simpson, K., T. A. Mosley, and J. A. Kokubo. 1981. Basic data for the 1979 Canadian salmonid catch sampling and mark recovery program. Catch, sample size, observed and estimated mark recoveries for 16 catch regions. [In 4 parts]. 3133 p. (11)
213. Irwin, B., W. G. Harrison, C. L. Gallegos, and T. Platt. 1980. Phytoplankton productivity experiments and nutrient measurements in the Labrador Sea, Davis Strait, Baffin Bay and Lancaster Sound from 26 August to 14 September 1978. 103 p. (7)
219. Manzon, C. I., and D. E. Marshall. 1980. Catalogue of salmon streams and spawning escapements of Statistical Area 8. 129 p. (1)
220. Reddin, D. G., and F. A. Day. 1980. 1969-72 Newfoundland and Labrador Atlantic salmon (*Salmo salar*) commercial catch data. 55 p. (9)
221. Moores, R. B., and E. G. Dawe. 1980. Atlantic salmon commercial catch data, Newfoundland and Labrador, 1979. 95 p. (9)
222. Britton, E. W., and D. E. Marshall. 1980. Catalogue of salmon streams and spawning escapements of Statistical Areas 9 and 10, (Rivers Inlet and Smith Inlet). 164 p. (12)
223. Aro, K. V. 1980. Recoveries of salmon tagged offshore in the North Pacific Ocean by Japan and the United States in 1977, 1978, and 1979, and additional recoveries from earlier taggings by Canada, Japan, and the United States. 19 p. (1)
224. Butler, T. H. 1980. Catch and effort statistics of the Canadian shrimp fishery on the Pacific Coast in 1979. 5 p. (1)
225. Cass, A. J., R. J. Beamish, M. S. Smith, and K. Weir. 1980. Hake and pollock study, Strait of Georgia cruise, G. B. Reed, January 13-28, 1976. 88 p. (1)
226. Richards, J. E., C. P. Archibald, and L. R. Rosenfeld. 1980. Exploratory midwater fishing for rockfish off the west coast of Vancouver Island, January 22-February 1, 1980. 47 p. (1)
227. Boutillier, J. A., K. Pasmans, and S. F. Head. 1980. G. B. Reed shrimp cruise 80-S-1, May 7-21, 1980, west coast of Vancouver Island and Queen Charlotte Sound. 60 p. (1)
228. Hourston, A. S. 1980. British Columbia herring landings for the 1970-71 season. 20 p. (1)
229. Hourston, A. S. 1980. British Columbia herring sampling data for the 1970-71 season. 57 p. (1)
230. Hourston, A. S. 1980. British Columbia herring sampling data for the 1978-79 season. 175 p. (1)
231. Hourston, A. S. 1980. British Columbia herring landings for the 1971-72 season. 36 p. (1)
232. Hourston, A. S. 1980. British Columbia herring landings for the 1972-73 season. 81 p. (1)
233. Hourston, A. S. 1980. British Columbia herring landings for the 1973-74 season. 143 p. (1)
234. Hourston, A. S. 1980. British Columbia herring landings for the 1974-75 season. 174 p. (1)
235. Hourston, A. S. 1980. British Columbia herring landings for the 1975-76 season. 270 p. (1)
236. Hourston, A. S. 1980. British Columbia herring landings for the 1976-77 season. 264 p. (1)
237. Hourston, A. S. 1980. British Columbia herring landings for the 1977-78 season. 341 p. (1)
238. Hourston, A. S. 1980. British Columbia herring landings for the 1978-79 season. 198 p. (1)
239. Hourston, A. S. 1980. British Columbia herring landings for the 1979-80 season. 84 p. (1)
240. Percy, J. A. 1980. Studies on factors influencing the respiratory metabolism

- of an arctic marine amphipod, *Onisimus* (= *Boeckosimus*) *affinis*. 70 p. (5)
241. Levings, C. D. 1980. Vertical distribution and abundance of epibenthos and macrozooplankton in the lower Fraser River estuary. 59 p. (3)
 242. Hourston, A. S. 1980. British Columbia herring sampling data for the 1971-72 season. 152 p. (1)
 243. Hourston, A. S. 1980. British Columbia herring sampling data for the 1972-73 season. 122 p. (1)
 244. Hourston, A. S. 1980. British Columbia herring sampling data for the 1973-74 season. 134 p. (1)
 245. Hourston, A. S. 1980. British Columbia herring sampling data for the 1974-75 season. 310 p. (1)
 246. Hourston, A. S. 1980. British Columbia herring sampling data for the 1975-76 season. 262 p. (1)
 247. Hourston, A. S. 1980. British Columbia herring sampling data for the 1976-77 season. 187 p. (1)
 248. Hourston, A. S. 1980. British Columbia herring sampling data for the 1977-78 season. 196 p. (1)
 249. Hourston, A. S. 1980. British Columbia herring sampling data for the 1979-80 season. 289 p. (1)
 250. Hourston, A. S. 1981. Summary tables for annual assessments of the status of British Columbia herring stocks in the 1970s. 381 p. (1)
 251. Thompson, J. M. 1981. Walleye pollock study in Queen Charlotte Sound and Dixon Entrance during September 21-29, 1979: M/V Arctic Harvester. 77 p. (1)
 252. Bilton, H. T., and A. S. Coburn. 1981. Time and size at release experiment: four releases of three size groups of juvenile coho salmon from Quinsam Hatchery, spring of 1980. 23 p. (1)
 253. Hourston, A. S., V. Haist, and R. D. Humphreys. 1981. Fecundity data for British Columbia herring sampled in 1974 and 1978. 176 p. (1)
 254. Ingram, J. H. 1981. Fish-count data at Beechwood Dam fish-collection facilities, 1972-76. 33 p. (8)
 255. Kristofferson, A. H., and D. K. McGowan. 1981. Data on Arctic charr, *Salvelinus alpinus* (Linnaeus), collected from test fisheries in the Baffin Region, Northwest Territories, 1975-79. 43 p. (4)
 256. Hourston, A. S. 1981. Summaries of British Columbia herring catch and sampling data by section, week, and gear for the 1970s. 488 p. (1)
 257. Hourston, A. S. 1981. British Columbia herring spawn deposition data for the 1970s. 200 p. (1)
 258. Smith, S. J. 1981. Atlantic salmon sport catch and effort data, Maritimes Region, 1951-79. 267 p. (8)
 259. Shearer, J. A., and E. R. DeBruyn. 1981. Light attenuation in the Experimental Lakes Area - 1980 data. 50 p. (4)
 260. DeBruyn, E. R., and J. A. Shearer. 1981. Phytoplankton primary production, chlorophyll and suspended carbon in the Experimental Lakes Area - 1980 data. 52 p. (4)
 261. Lovrity, J. E. 1981. Oceanographic data from Frobisher Bay and Winton Bay in the Eastern Canadian Arctic for the years 1978 and 1979. 117 p. (5)
 262. Beamish, R. J., M. S. Smith, V. Egan, D. Brown, and G. McFarlane. 1981. Results of spiny dogfish (*Squalus acanthias*) tagging in the Strait of Georgia in 1979. 73 p. (1)
 263. Moores, R. B., and R. J. Tucker. 1981. Angled catch and effort data in the Atlantic salmon recreational fishery, Newfoundland and Labrador, 1980. 85 p. (9)
 264. Margolis, L., T. E. McDonald, and G. E. Hoskins. 1981. Collections of salmonids from British Columbia, 1968-1980, examined for the protozoan *Myxosoma cerebralis* (Myxozoa, Myxosporidia). 8 p. (1)
 265. Miller, D. C. 1981. Report on May 15-27, 1980 cruise of F/V Sun Maiden. 17 p. (1)
 266. Carter, E. W., and B. M. Leaman. 1981. Exploratory fishing of Bowie Seamount by the automated longliner M/V Viking Star. 39 p. (1)
 267. Hourston, A. S., and H. Rosenthal. 1981. Data summaries for viable hatch from Pacific herring eggs deposited at different intensities on a variety of substrates. 56 p. (1)

268. Webb, L. A., J. F. Schweigert, and A. S. Hourston. 1981. Gillnet selectivity data for the British Columbia herring roe fishery in 1976. 50 p. (1)
269. Kendaris, T. A. 1981. The distribution of temperature, salinity and density on Flemish Cap (47°00'N, 45°00'W) in March, April and May 1979. 127 p. (9)
270. Kendaris, T. A. 1981. The distribution of temperature, salinity and density on Flemish Cap (47°00'N, 45°00'W) in April, May and July 1980. 173 p. (9)
271. Newbould, K. A. 1981. Hatchery salmonid production and distribution (1978-79), Nova Scotia, New Brunswick and Prince Edward Island. 241 p. (8)
273. Dalton, J. A. 1981. Hydrometeorological data from the Saqvaqjuac Project, N.W.T., 1977 to 1980. 43 p. (4)
274. Pomeroy, W. M., D. Gordon, and C. D. Levings. 1981. Data report on brackish marsh transplant experiments at the Fraser estuary. 76 p. (3)
275. Mason, J. C., O. D. Kennedy, and A. C. Phillips. 1981. Canadian Pacific coast ichthyoplankton survey, 1980. Ichthyoplankton. Cruise one (January 15-22). 57 p. (1)
276. Mason, J. C., O. D. Kennedy, and A. C. Phillips. 1981. Canadian Pacific coast ichthyoplankton survey, 1980. Ichthyoplankton. Cruise two (February 13-20). 66 p. (1)
277. Mason, J. C., O. D. Kennedy, and A. C. Phillips. 1981. Canadian Pacific coast ichthyoplankton survey, 1980. Ichthyoplankton. Cruise three (March 12-20). 75 p. (1)
278. Mason, J. C., O. D. Kennedy, and A. C. Phillips. 1981. Canadian Pacific coast ichthyoplankton survey, 1980. Ichthyoplankton. Cruise four (April 15-23). 80 p. (1)
279. Mason, J. C., O. D. Kennedy, and T. H. Mullin. 1981. Canadian Pacific coast ichthyoplankton survey, 1980. Hydrography. Part one. Horizontal contours of temperature, salinity, and sigma-t, at selected depths, by monthly cruise. 110 p. (1)
280. Mason, J. C., O. D. Kennedy, and T. H. Mullin. 1981. Canadian Pacific coast ichthyoplankton survey, 1980. Hydrography. Part two. Vertical contours of temperature, salinity, and sigma-t on transect lines, by monthly cruise. 77 p. (1)
281. Mason, J. C., O. D. Kennedy, and T. H. Mullin. 1981. Canadian Pacific coast ichthyoplankton survey, 1980. Hydrography. Part three. Vertical profiles of temperature, salinity, and sigma-t by station. 114 p. (1)
282. Short, P. B., and D. G. Reddin. 1981. Newfoundland and Labrador Atlantic salmon commercial catch data - 1977. 103 p. (9)
283. Short, P. B., and D. G. Reddin. 1981. Newfoundland and Labrador Atlantic salmon commercial catch data - 1978. 114 p. (9)
284. Carder, G. W. 1981. Data from the commercial fishery for Arctic charr, *Salvelinus alpinus* (Linnaeus), in the Cambridge Bay area, Northwest Territories, 1979-80. 22 p. (4)
285. Beaty, K. G. 1981. Hydrometeorological data for the Experimental Lakes Area, Northwestern Ontario, 1969 through 1978 (in three parts). (Part I) 1-97; (Part II) 98-316; (Part III) 317-367. (4)
286. Lapi, L. A., and J. E. Richards. 1981. Data collected during rockfish (*Sebastes* spp.) assessments of west Langara Island and west coast Vancouver Island fishing grounds in 1979. 113 p. (1)

INDUSTRY REPORTS/RAPPORTS A L'INDUSTRIE

Abbreviation/Abréviation: I

(NOTE: These reports contain the results of research and development that are useful to industry for either immediate or future application. Industry Reports are directed primarily towards individuals in the primary and secondary sectors of the fishing and marine industries. No restriction is placed on subject matter and the series reflects the broad interests and policies of

the Department of Fisheries and Oceans, namely, fisheries management, technology and development, ocean sciences, and aquatic environments relevant to Canada.

Industry Reports may be cited as full publications. The correct citation appears above the abstract of each report. Each report will be abstracted in *Aquatic Sciences and Fisheries Abstracts* and will be indexed annually in the Department's index to scientific and technical publications.

Numbers 1-91 in this series were issued as Project Reports of the Industrial Development Branch, Technical Reports of the Industrial Development Branch, and Technical Reports of the Fisherman's Service Branch. Numbers 92-110 were issued as Department of Fisheries and the Environment, Fisheries and Marine Service Industry Reports. The current series name was changed with report number 111 and is now Canadian Industry Report of Fisheries and Aquatic Sciences.

Number 113 was issued too late for listing and indexing in previous indexes. It is indexed herein. The numerals in parentheses at the end of each reference indicate the name of the establishment from which the information or the report originated. See pages 1928 and 1929 for addresses corresponding to these numerals. Copies of Industry Reports may be obtained from Micromedia Ltd., 144 Front Street West, Toronto, Ontario M5J 1G2.)

(REMARQUE: Ces rapports contiennent les résultats des recherches et des progrès qui peuvent être utiles à l'industrie pour des applications soit immédiates, soit futures. Ils sont préparés à l'intention principalement des membres des secteurs primaire et secondaire de l'industrie des pêches et de la mer. Il n'y a aucune restriction quant au sujet; de fait, la série reflète la vaste gamme des intérêts et des politiques du Ministère des Pêches et des Océans, notamment gestion des pêches, techniques et développement, sciences océaniques et environnements aquatiques, au Canada.

Les Rapports destinés à l'industrie peuvent être considérés comme des publications complètes. Le titre exact paraît au haut du résumé de chaque rapport, qui sera publié dans la revue *Aquatic Sciences and Fisheries Abstracts* et qui figurera dans l'index annuel des publications scientifiques et techniques du Ministère.

Les numéros de 1 à 91 de cette série ont été publiés à titre de rapports sur les travaux de la Direction du développement industriel, de rapports techniques de la Direction du développement industriel, et de rapports techniques de la Direction des services aux pêcheurs. Les numéros 92 à 110 ont été publiés à titre de Rapports à l'industrie du Service des pêches et de la mer, Ministère des Pêches et de l'Environnement. Le nom de la série a été changé à partir du rapport numéro 111 et est maintenant Rapport canadien à l'industrie sur les sciences halieutiques et aquatiques.

Le numéro 113 était sorti trop tard pour l'inclure dans les index antérieurs. Le numéro entre parenthèses, à la fin de chaque référence, indique l'établissement d'où provient la documentation du rapport. Voir aux pages 1928 et 1929 les adresses correspondant à ces numéros. On peut se procurer des exemplaires de Rapports à l'industrie auprès de Micromedia Ltd., 144 Front Street West, Toronto, Ontario M5J 1G2.)

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| 113. Parker, H., and P. E. Rowe. 1979. Prototype mechanical smoker-dryer for smoking hard cured bloaters. 11 p. (8) | 122. Bernard, F. R. 1981. Canadian west coast flying squid experimental fishery. 23 p. (1) |
| 119F. Andersen, A. et M. Gagnon. 1980. Les ressources halieutiques de l'estuaire du Saint-Laurent. 56 p. (13) | 123. Jamieson, G. S., T. Amaratunga, R. E. Lavoie, and G. Robert. 1981. Capsule overview of Maritimes mollusc fisheries. 24 p. (8) |
| 120. Chalmers, D. D., and P. E. Sprout. 1980. Review of the 1978-79 British Columbia herring fishery and spawn abundance. 51 p. (12) | 124. Grinnell, H. R. 1981. The implications of offshore petroleum development for Atlantic fisheries: a socio-economic overview. 31 p. (10) |
| 121. Ketchen, K. S. 1980. Tuna fishing prospects for Canadian west coast fishermen. 37 p. (1) | 125. Haegle, C. W. 1981. Tagging of herring in British Columbia during the 1979-80 herring season. 45 p. (1) |

STUDIES/ETUDES

Abbreviation/Abréviation: S

(NOTE: Until 1970, reprints of these articles had been included in an annual volume of *Studies*

composed of two parts. The final binding was the 1969 *Studies*, part 2, which included No. 1355. These are no longer bound and distributed. We continue, however, to number and list all articles which henceforth may be obtained in reprint form only from the author or originating establishment, indicated by the numeral at the end of each reference. See pages 1928 and 1929 for addresses corresponding to these numerals.)

(REMARQUE: Jusqu'en 1970, ces articles ont été réimprimés dans un volume annuel intitulé *Studies* composé de deux parties. La dernière parution a été dans *Studies* 1969, partie 2, qui comprenait le numéro 1355. Elles ne sont toutefois plus reliées ni distribuées. Nous continuons, cependant, à numéroter et à énumérer tous les articles qu'on peut obtenir seulement de l'auteur ou l'établissement de provenance qui est indiqué par le numéro à la fin de chaque référence. Voir aux pages 1928 et 1929 les adresses correspondant à ces numéros.)

2737. Bisalputra, T., and N. J. Antia. 1980. Cytological mechanism underlying darkness-survival of the unicellular red alga *Porphyridium cruentum*. *Bot. Mar.* 23: 719-730. (3)
2738. Carrothers, P. J. G. 1980. Estimation of trawl door spread from wing spread. *J. Northw. Atl. Fish. Sci.* 1: 81-89. (6)
2739. Carter, J. C. H., M. J. Dadswell, J. C. Roff, and W. G. Sprules. 1980. Distribution and zoogeography of planktonic crustaceans and dipterans in glaciated eastern North America. *Can. J. Zool.* 58: 1355-1387. (6)
2740. Elner, R. W., and A. Campbell. 1981. Force, function and mechanical advantage in the chelae of the American lobster *Homarus americanus* (Decapoda: Crustacea). *J. Zool., Lond.* 193: 269-286. (6)
2741. Harrison, W. G., and T. Platt. 1980. Variations in assimilation number of coastal marine phytoplankton: effects of environmental co-variables. *J. Plankton Res.* 2: 249-260. (7)
2742. Hunt, J. J. 1980. Guidelines for age determination of silver hake, *Merluccius bilinearis*, using otoliths. *J. Northw. Atl. Fish. Sci.* 1: 65-80. (6)
2743. Maciorowski, H. D., and R. McV. Clarke. 1980. Advantages and disadvantages of using invertebrates in toxicity testing, p. 36-47. In A. L. Buikeman Jr., and J. Cairns Jr. (eds.) *Aquatic invertebrate bioassays*. Am. Soc. Test. Mat., Spec. Tech. Publ. 715. (4)
2744. McLeese, D. W., and C. D. Metcalfe. 1980. Toxicities of eight organochlorine compounds in sediment and seawater to *Crangon septemspinosa*. *Bull. Environ. Contam. Toxicol.* 25: 921-928. (6)
2745. McLeese, D. W., C. D. Metcalfe, and V. Zitko. 1980. Lethality of permethrin, cypermethrin and fenvalerate to salmon, lobster and shrimp. *Bull. Environ. Contam. Toxicol.* 25: 950-955. (6)
2746. Platt, T., C. L. Gallegos, and W. G. Harrison. 1980. Photoinhibition of photosynthesis in natural assemblages of marine phytoplankton. *J. Mar. Res.* 38: 687-701. (7)
2747. Rantala, R. T. T., and D. H. Loring. 1980. Direct determination of cadmium in silicates from a fluoboric-boric acid matrix by graphite furnace atomic absorption spectrometry. *At. Spectrosc.* 1: 163-165. (7)
2748. Schafer, C. T., J. N. Smith, and D. H. Loring. 1980. Recent sedimentation events at the head of Saguenay Fjord, Canada. *Environ. Geol.* 3: 139-150. (7)
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- 1980
- (NOTE: A number of 1980 Research Documents were received too late for listing and indexing in previous indexes. They are listed and indexed herein.)
- (REMARQUE: Un numéro des documents de la recherche pour 1980 sont sortis trop tard pour les inclure dans les index antérieurs.)
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- 81/48F. Lamoureux, P. 1981. Evolution des rendements chez les bateaux exploitant le crabe des neiges (*Chionoecetes opilio*) dans le sud-ouest du golfe du Saint-Laurent de 1974 à 1980. 24 p.
- 81/49. Metuzals, K., and A. Fullerton. 1981. Review of the white hake, *Urophycis tenuis* fishery. 15 p.
- 81/50. Gavaris, C. A. 1981. An assessment of redfish in Subarea 2 + Division 3K. 15 p.
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- 81/62. Metuzals, K. I. 1981. Flatfish stock trends of the Scotian Shelf. 44 p.





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